SEQUENCE LISTING

<110> LeClair, Ken
       Srivastava, Pramod K.

<120> Heat Shock Protein Binding Fragments of CD91, and Uses Thereof

<130> 8449-304-999

<150> PCT/US03/32167
<151> 2003-10-07

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tggatgtact ggacagactg ggaggaggac cccaaggaca gtcggcgtgg gcggctggag      2040

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        20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
        50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
    195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245   250   255

- 3 -

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Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
        260             265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420             425             430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470             475             480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485             490             495
```

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Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500               505               510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515               520               525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530               535               540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545               550               555               560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565               570               575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580               585               590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595               600               605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610               615               620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625               630               635               640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
            645               650               655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660               665               670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675               680               685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690               695               700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705               710               715               720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725               730               735
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Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
        740               745               750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755               760               765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
        770               775               780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785               790               795               800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805               810               815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820               825               830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835               840               845

Val Pro Pro
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1               5               10              15

Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
        20              25              30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35              40              45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50              55              60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65              70              75              80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85              90              95
```

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Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100                 105                 110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115                 120                 125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
        130                 135                 140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145                 150                 155                 160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
                165                 170                 175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180                 185                 190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195                 200                 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210                 215                 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230                 235                 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
                245                 250                 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
                260                 265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
                325                 330                 335
```

```
Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340                 345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
            355                 360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
            370                 375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385                 390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
                405                 410                 415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420                 425             430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435                 440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
            450                 455             460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465                 470                 475                 480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485                 490                 495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500                 505             510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515                 520             525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530                 535                 540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545                 550                 555                 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565                 570                 575
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Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
        580             585             590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595             600             605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610             615             620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625             630             635             640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
            645             650             655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660             665             670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675             680             685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690             695             700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705             710             715             720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725             730             735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
        740             745             750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755             760             765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770             775             780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785             790             795             800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805             810             815
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Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
            820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
            835   840   845

Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
            850   855   860

Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe
865   870   875   880

Glu Ala Gln Lys Ile Glu Trp His Glu Gly His His His His His His
            885   890   895

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<213>   M.

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Val Ser Gly Ala Thr Met Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln
            20   25   30

Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys
            35   40   45

Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
            50   55   60

Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
65   70   75   80

Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
            85   90   95

Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
            100   105   110

Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
            115   120   125

Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
            130   135   140

- 10 -

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Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
145             150             155             160

Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
            165             170             175

Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
            180             185             190

Asn Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln
        195             200             205

Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
    210             215             220

Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
225             230             235             240

Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
            245             250             255

Leu Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His
        260             265             270

Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
    275             280             285

Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg
    290             295             300

Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
305             310             315             320

Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
            325             330             335

Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
            340             345             350 .

Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
        355             360             365

Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
370             375             380
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Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
385             390         395             400

Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
            405         410             415

Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
            420         425             430

Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
        435         440         445

Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
    450         455         460

Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
465         470         475             480

Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
            485         490             495

Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
        500         505         510

Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
        515         520         525

Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
    530         535         540

Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
545         550         555             560

Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
            565         570             575

Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
        580         585         590

Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
    595         600         605

Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
    610         615         620
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Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
625   630   635   640

Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
                645   650   655

Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro
            660   665   670

Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
        675   680   685

His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
    690   695   700

Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
705   710   715   720

Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
            725   730   735

Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
        740   745   750

Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
        755   760   765

Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
    770   775   780

Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
785   790   795   800

Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
            805   810   815

Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu
        820   825   830

Asp Gln Val Leu Asp Thr Asp Gly Val Thr Cys Leu
        835   840

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<212>   PRT
<213>   H. sapiens

- 13 -

<400> 5

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
        180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn

        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
210   215   220

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Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230         235             240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280             285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420             425             430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460
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Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
                740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
                755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
        770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
                820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
                835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
        850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
                900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
                915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930   935   940

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Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945                 950             955             960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965             970             975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
                980             985             990

Asn Trp Arg Cys Asp Asn Asp Asn  Asp Cys Gly Asp Asn  Ser Asp Glu
        995             1000            1005

Ala Gly  Cys Ser His Ser Cys  Ser Ser Thr Gln Phe  Lys Cys Asn
    1010            1015            1020

Ser Gly  Arg Cys Ile Pro Glu  His Trp Thr Cys Asp  Gly Asp Asn
    1025            1030            1035

Asp Cys  Gly Asp Tyr Ser Asp  Glu Thr His Ala Asn  Cys Thr Asn
    1040            1045            1050

Gln Ala  Thr Arg Pro Pro Gly  Gly Cys His Thr Asp  Glu Phe Gln
    1055            1060            1065

Cys Arg  Leu Asp Gly Leu Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    1070            1075            1080

Gly Asp  Thr Asp Cys Met Asp  Ser Ser Asp Glu Lys  Ser Cys Glu
    1085            1090            1095

Gly Val  Thr His Val Cys Asp  Pro Ser Val Lys Phe  Gly Cys Lys
    1100            1105            1110

Asp Ser  Ala Arg Cys Ile Ser  Lys Ala Trp Val Cys  Asp Gly Asp
    1115            1120            1125

Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130            1135            1140

Ala Cys  Arg Pro Pro Ser His  Pro Cys Ala Asn Asn  Thr Ser Val
    1145            1150            1155

Cys Leu  Pro Pro Asp Lys Leu  Cys Asp Gly Asn Asp  Asp Cys Gly
    1160            1165            1170
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Asp Gly  Ser Asp Glu Gly Glu  Leu Cys Asp Gln Cys  Ser Leu Asn
    1175                 1180             1185

Asn Gly  Gly Cys Ser His Asn  Cys Ser Val Ala Pro  Gly Glu Gly
    1190                 1195             1200

Ile Val  Cys Ser Cys Pro Leu  Gly Met Glu Leu Gly  Pro Asp Asn
    1205                 1210             1215

His Thr  Cys Gln Ile Gln Ser  Tyr Cys Ala Lys His  Leu Lys Cys
    1220                 1225             1230

Ser Gln  Lys Cys Asp Gln Asn  Lys Phe Ser Val Lys  Cys Ser Cys
    1235                 1240             1245

Tyr Glu  Gly Trp Val Leu Glu  Pro Asp Gly Glu Ser  Cys Arg Ser
    1250                 1255             1260

Leu Asp  Pro Phe Lys Pro Phe  Ile Ile Phe Ser Asn  Arg His Glu
    1265                 1270             1275

Ile Arg  Arg Ile Asp Leu His  Lys Gly Asp Tyr Ser  Val Leu Val
    1280                 1285             1290

Pro Gly  Leu Arg Asn Thr Ile  Ala Leu Asp Phe His  Leu Ser Gln
    1295                 1300             1305

Ser Ala  Leu Tyr Trp Thr Asp  Val Val Glu Asp Lys  Ile Tyr Arg
    1310                 1315             1320

Gly Lys  Leu Leu Asp Asn Gly  Ala Leu Thr Ser Phe  Glu Val Val
    1325                 1330             1335

Ile Gln  Tyr Gly Leu Ala Thr  Pro Glu Gly Leu Ala  Val Asp Trp
    1340                 1345             1350

Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355                 1360             1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370                 1375             1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385                 1390             1395
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Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400                  1405                1410

Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415                  1420                1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430                  1435                1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445                  1450                1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460                  1465                1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475                  1480                1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490                  1495                1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505                  1510                1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520                  1525                1530

Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535                  1540                1545

Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550                  1555                1560

Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565                  1570                1575

Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580                  1585                1590

Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595                  1600                1605

Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610                  1615                1620
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Ala Arg   Glu Gln Arg Val Tyr   Trp Ser Asp Val Arg   Thr Gln Ala
    1625              1630                  1635

Ile Lys   Arg Ala Phe Ile Asn   Gly Thr Gly Val Glu   Thr Val Val
    1640              1645                  1650

Ser Ala   Asp Leu Pro Asn Ala   His Gly Leu Ala Val   Asp Trp Val
    1655              1660                  1665

Ser Arg   Asn Leu Phe Trp Thr   Ser Tyr Asp Thr Asn   Lys Lys Gln
    1670              1675                  1680

Ile Asn   Val Ala Arg Leu Asp   Gly Ser Phe Lys Asn   Ala Val Val
    1685              1690                  1695

Gln Gly   Leu Glu Gln Pro His   Gly Leu Val Val His   Pro Leu Arg
    1700              1705                  1710

Gly Lys   Leu Tyr Trp Thr Asp   Gly Asp Asn Ile Ser   Met Ala Asn
    1715              1720                  1725

Met Asp   Gly Ser Asn Arg Thr   Leu Leu Phe Ser Gly   Gln Lys Gly
    1730              1735                  1740

Pro Val   Gly Leu Ala Ile Asp   Phe Pro Glu Ser Lys   Leu Tyr Trp
    1745              1750                  1755

Ile Ser   Ser Gly Asn His Thr   Ile Asn Arg Cys Asn   Leu Asp Gly
    1760              1765                  1770

Ser Gly   Leu Glu Val Ile Asp   Ala Met Arg Ser Gln   Leu Gly Lys
    1775              1780                  1785

Ala Thr   Ala Leu Ala Ile Met   Gly Asp Lys Leu Trp   Trp Ala Asp
    1790              1795                  1800

Gln Val   Ser Glu Lys Met Gly   Thr Cys Ser Lys Ala   Asp Gly Ser
    1805              1810                  1815

Gly Ser   Val Val Leu Arg Asn   Ser Thr Thr Leu Val   Met His Met
    1820              1825                  1830

Lys Val   Tyr Asp Glu Ser Ile   Gln Leu Asp His Lys   Gly Thr Asn
    1835              1840                  1845
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Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850                 1855              1860


Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865                 1870              1875


Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880                 1885              1890


Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895                 1900              1905


Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910                 1915              1920


Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925                 1930              1935


Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940                 1945              1950


Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955                 1960              1965


Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970                 1975              1980


Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985                 1990              1995


Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000                 2005              2010


Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015                 2020              2025


Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030                 2035              2040


Val Val  Leu Val Asn Val Ser  Ile Ser Trp Pro Asn  Gly Ile Ser
    2045                 2050              2055


Val Asp  Tyr Gln Asp Gly Lys  Leu Tyr Trp Cys Asp  Ala Arg Thr
    2060                 2065              2070
```

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

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Cys Arg  Ala Gln Asp Glu Phe  Glu Cys Ala Asn Gly  Glu Cys Ile
    2525              2530              2535

Asn Phe  Ser Leu Thr Cys Asp  Gly Val Pro His Cys  Lys Asp Lys
    2540              2545              2550

Ser Asp  Glu Lys Pro Ser Tyr  Cys Asn Ser Arg Arg  Cys Lys Lys
    2555              2560              2565

Thr Phe  Arg Gln Cys Ser Asn  Gly Arg Cys Val Ser  Asn Met Leu
    2570              2575              2580

Trp Cys  Asn Gly Ala Asp Asp  Cys Gly Asp Gly Ser  Asp Glu Ile
    2585              2590              2595

Pro Cys  Asn Lys Thr Ala Cys  Gly Val Gly Glu Phe  Arg Cys Arg
    2600              2605              2610

Asp Gly  Thr Cys Ile Gly Asn  Ser Ser Arg Cys Asn  Gln Phe Val
    2615              2620              2625

Asp Cys  Glu Asp Ala Ser Asp  Glu Met Asn Cys Ser  Ala Thr Asp
    2630              2635              2640

Cys Ser  Ser Tyr Phe Arg Leu  Gly Val Lys Gly Val  Leu Phe Gln
    2645              2650              2655

Pro Cys  Glu Arg Thr Ser Leu  Cys Tyr Ala Pro Ser  Trp Val Cys
    2660              2665              2670

Asp Gly  Ala Asn Asp Cys Gly  Asp Tyr Ser Asp Glu  Arg Asp Cys
    2675              2680              2685

Pro Gly  Val Lys Arg Pro Arg  Cys Pro Leu Asn Tyr  Phe Ala Cys
    2690              2695              2700

Pro Ser  Gly Arg Cys Ile Pro  Met Ser Trp Thr Cys  Asp Lys Glu
    2705              2710              2715

Asp Asp  Cys Glu His Gly Glu  Asp Glu Thr His Cys  Asn Lys Phe
    2720              2725              2730

Cys Ser  Glu Ala Gln Phe Glu  Cys Gln Asn His Arg  Cys Ile Ser
    2735              2740              2745
```

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

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Lys Asp  Asp Gly Arg Thr Cys  Ala Asp Val Asp Glu  Cys Ser Thr
    2975             2980             2985

Thr Phe  Pro Cys Ser Gln Arg  Cys Ile Asn Thr His  Gly Ser Tyr
    2990             2995             3000

Lys Cys  Leu Cys Val Glu Gly  Tyr Ala Pro Arg Gly  Gly Asp Pro
    3005             3010             3015

His Ser  Cys Lys Ala Val Thr  Asp Glu Glu Pro Phe  Leu Ile Phe
    3020             3025             3030

Ala Asn  Arg Tyr Tyr Leu Arg  Lys Leu Asn Leu Asp  Gly Ser Asn
    3035             3040             3045

Tyr Thr  Leu Leu Lys Gln Gly  Leu Asn Asn Ala Val  Ala Leu Asp
    3050             3055             3060

Phe Asp  Tyr Arg Glu Gln Met  Ile Tyr Trp Thr Asp  Val Thr Thr
    3065             3070             3075

Gln Gly  Ser Met Ile Arg Arg  Met His Leu Asn Gly  Ser Asn Val
    3080             3085             3090

Gln Val  Leu His Arg Thr Gly  Leu Ser Asn Pro Asp  Gly Leu Ala
    3095             3100             3105

Val Asp  Trp Val Gly Gly Asn  Leu Tyr Trp Cys Asp  Lys Gly Arg
    3110             3115             3120

Asp Thr  Ile Glu Val Ser Lys  Leu Asn Gly Ala Tyr  Arg Thr Val
    3125             3130             3135

Leu Val  Ser Ser Gly Leu Arg  Glu Pro Arg Ala Leu  Val Val Asp
    3140             3145             3150

Val Gln  Asn Gly Tyr Leu Tyr  Trp Thr Asp Trp Gly  Asp His Ser
    3155             3160             3165

Leu Ile  Gly Arg Ile Gly Met  Asp Gly Ser Ser Arg  Ser Val Ile
    3170             3175             3180

Val Asp  Thr Lys Ile Thr Trp  Pro Asn Gly Leu Thr  Leu Asp Tyr
    3185             3190             3195
```

Val Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile
    3200   3205   3210

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
    3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
    3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
    3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
    3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
    3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
    3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
    3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
    3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
    3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
    3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
    3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
    3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
    3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
    3410   3415   3420

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Asn Arg  Cys Ile Pro Gly Ile  Phe Arg Cys Asn Gly  Gln Asp Asn
    3425             3430              3435

Cys Gly  Asp Gly Glu Asp Glu  Arg Asp Cys Pro Glu  Val Thr Cys
    3440             3445              3450

Ala Pro  Asn Gln Phe Gln Cys  Ser Ile Thr Lys Arg  Cys Ile Pro
    3455             3460              3465

Arg Val  Trp Val Cys Asp Arg  Asp Asn Asp Cys Val  Asp Gly Ser
    3470             3475              3480

Asp Glu  Pro Ala Asn Cys Thr  Gln Met Thr Cys Gly  Val Asp Glu
    3485             3490              3495

Phe Arg  Cys Lys Asp Ser Gly  Arg Cys Ile Pro Ala  Arg Trp Lys
    3500             3505              3510

Cys Asp  Gly Glu Asp Asp Cys  Gly Asp Gly Ser Asp  Glu Pro Lys
    3515             3520              3525

Glu Glu  Cys Asp Glu Arg Thr  Cys Glu Pro Tyr Gln  Phe Arg Cys
    3530             3535              3540

Lys Asn  Asn Arg Cys Val Pro  Gly Arg Trp Gln Cys  Asp Tyr Asp
    3545             3550              3555

Asn Asp  Cys Gly Asp Asn Ser  Asp Glu Glu Ser Cys  Thr Pro Arg
    3560             3565              3570

Pro Cys  Ser Glu Ser Glu Phe  Ser Cys Ala Asn Gly  Arg Cys Ile
    3575             3580              3585

Ala Gly  Arg Trp Lys Cys Asp  Gly Asp His Asp Cys  Ala Asp Gly
    3590             3595              3600

Ser Asp  Glu Lys Asp Cys Thr  Pro Arg Cys Asp Met  Asp Gln Phe
    3605             3610              3615

Gln Cys  Lys Ser Gly His Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    3620             3625              3630

Ala Asp  Ala Asp Cys Met Asp  Gly Ser Asp Glu Glu  Ala Cys Gly
    3635             3640              3645
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Thr Gly  Val Arg Thr Cys Pro  Leu Asp Glu Phe Gln  Cys Asn Asn
    3650             3655                 3660

Thr Leu  Cys Lys Pro Leu Ala  Trp Lys Cys Asp Gly  Glu Asp Asp
    3665             3670                 3675

Cys Gly  Asp Asn Ser Asp Glu  Asn Pro Glu Glu Cys  Ala Arg Phe
    3680             3685                 3690

Val Cys  Pro Pro Asn Arg Pro  Phe Arg Cys Lys Asn  Asp Arg Val
    3695             3700                 3705

Cys Leu  Trp Ile Gly Arg Gln  Cys Asp Gly Thr Asp  Asn Cys Gly
    3710             3715                 3720

Asp Gly  Thr Asp Glu Glu Asp  Cys Glu Pro Pro Thr  Ala His Thr
    3725             3730                 3735

Thr His  Cys Lys Asp Lys Lys  Glu Phe Leu Cys Arg  Asn Gln Arg
    3740             3745                 3750

Cys Leu  Ser Ser Ser Leu Arg  Cys Asn Met Phe Asp  Asp Cys Gly
    3755             3760                 3765

Asp Gly  Ser Asp Glu Glu Asp  Cys Ser Ile Asp Pro  Lys Leu Thr
    3770             3775                 3780

Ser Cys  Ala Thr Asn Ala Ser  Ile Cys Gly Asp Glu  Ala Arg Cys
    3785             3790                 3795

Val Arg  Thr Glu Lys Ala Ala  Tyr Cys Ala Cys Arg  Ser Gly Phe
    3800             3805                 3810

His Thr  Val Pro Gly Gln Pro  Gly Cys Gln Asp Ile  Asn Glu Cys
    3815             3820                 3825

Leu Arg  Phe Gly Thr Cys Ser  Gln Leu Cys Asn Asn  Thr Lys Gly
    3830             3835                 3840

Gly His  Leu Cys Ser Cys Ala  Arg Asn Phe Met Lys  Thr His Asn
    3845             3850                 3855

Thr Cys  Lys Ala Glu Gly Ser  Glu Tyr Gln Val Leu  Tyr Ile Ala
    3860             3865                 3870
```

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

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Glu  Asp  Tyr  Ile  Tyr  Gly  Val  Thr  Tyr  Ile  Asn  Asn  Arg  Val  Phe
     4100                4105                4110

Lys  Ile  His  Lys  Phe  Gly  His  Ser  Pro  Leu  Val  Asn  Leu  Thr  Gly
     4115                4120                4125

Gly  Leu  Ser  His  Ala  Ser  Asp  Val  Val  Leu  Tyr  His  Gln  His  Lys
     4130                4135                4140

Gln  Pro  Glu  Val  Thr  Asn  Pro  Cys  Asp  Arg  Lys  Lys  Cys  Glu  Trp
     4145                4150                4155

Leu  Cys  Leu  Leu  Ser  Pro  Ser  Gly  Pro  Val  Cys  Thr  Cys  Pro  Asn
     4160                4165                4170

Gly  Lys  Arg  Leu  Asp  Asn  Gly  Thr  Cys  Val  Pro  Val  Pro  Ser  Pro
     4175                4180                4185

Thr  Pro  Pro  Pro  Asp  Ala  Pro  Arg  Pro  Gly  Thr  Cys  Asn  Leu  Gln
     4190                4195                4200

Cys  Phe  Asn  Gly  Gly  Ser  Cys  Phe  Leu  Asn  Ala  Arg  Arg  Gln  Pro
     4205                4210                4215

Lys  Cys  Arg  Cys  Gln  Pro  Arg  Tyr  Thr  Gly  Asp  Lys  Cys  Glu  Leu
     4220                4225                4230

Asp  Gln  Cys  Trp  Glu  His  Cys  Arg  Asn  Gly  Gly  Thr  Cys  Ala  Ala
     4235                4240                4245

Ser  Pro  Ser  Gly  Met  Pro  Thr  Cys  Arg  Cys  Pro  Thr  Gly  Phe  Thr
     4250                4255                4260

Gly  Pro  Lys  Cys  Thr  Gln  Gln  Val  Cys  Ala  Gly  Tyr  Cys  Ala  Asn
     4265                4270                4275

Asn  Ser  Thr  Cys  Thr  Val  Asn  Gln  Gly  Asn  Gln  Pro  Gln  Cys  Arg
     4280                4285                4290

Cys  Leu  Pro  Gly  Phe  Leu  Gly  Asp  Arg  Cys  Gln  Tyr  Arg  Gln  Cys
     4295                4300                4305

Ser  Gly  Tyr  Cys  Glu  Asn  Phe  Gly  Thr  Cys  Gln  Met  Ala  Ala  Asp
     4310                4315                4320
```

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Gly Ser  Arg Gln Cys Arg Cys  Thr Ala Tyr Phe Glu  Gly Ser Arg
    4325                 4330                 4335


Cys Glu  Val Asn Lys Cys Ser  Arg Cys Leu Glu Gly  Ala Cys Val
    4340                 4345                 4350


Val Asn  Lys Gln Ser Gly Asp  Val Thr Cys Asn Cys  Thr Asp Gly
    4355                 4360                 4365


Arg Val  Ala Pro Ser Cys Leu  Thr Cys Val Gly His  Cys Ser Asn
    4370                 4375                 4380


Gly Gly  Ser Cys Thr Met Asn  Ser Lys Met Met Pro  Glu Cys Gln
    4385                 4390                 4395


Cys Pro  Pro His Met Thr Gly  Pro Arg Cys Glu Glu  His Val Phe
    4400                 4405                 4410


Ser Gln  Gln Gln Pro Gly His  Ile Ala Ser Ile Leu  Ile Pro Leu
    4415                 4420                 4425


Leu Leu  Leu Leu Leu Leu Val  Leu Val Ala Gly Val  Val Phe Trp
    4430                 4435                 4440


Tyr Lys  Arg Arg Val Gln Gly  Ala Lys Gly Phe Gln  His Gln Arg
    4445                 4450                 4455


Met Thr  Asn Gly Ala Met Asn  Val Glu Ile Gly Asn  Pro Thr Tyr
    4460                 4465                 4470


Lys Met  Tyr Glu Gly Gly Glu  Pro Asp Asp Val Gly  Gly Leu Leu
    4475                 4480                 4485


Asp Ala  Asp Phe Ala Leu Asp  Pro Asp Lys Pro Thr  Asn Phe Thr
    4490                 4495                 4500


Asn Pro  Val Tyr Ala Thr Leu  Tyr Met Gly Gly His  Gly Ser Arg
    4505                 4510                 4515


His Ser  Leu Ala Ser Thr Asp  Glu Lys Arg Glu Leu  Leu Gly Arg
    4520                 4525                 4530


Gly Pro  Glu Asp Glu Ile Gly  Asp Pro Leu Ala
    4535                 4540
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<212> PRT
<213> H. sapiens

<400> 6

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

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Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230             235             240


Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255


Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270


Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280             285


Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300


Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320


Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335


Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350


Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365


Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380


Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400


Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415


Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420             425             430


Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440             445


Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460
```

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850   855   860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865   870   875   880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885   890   895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
        900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930   935   940

```
Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945                 950             955             960


Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965             970             975


Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
            980             985             990


Asn Trp Arg Cys Asp Asn Asp Asn  Asp Cys Gly Asp Asn  Ser Asp Glu
        995             1000            1005



Ala Gly  Cys Ser His Ser Cys  Ser Ser Thr Gln Phe  Lys Cys Asn
    1010            1015            1020


Ser Gly  Arg Cys Ile Pro Glu  His Trp Thr Cys Asp  Gly Asp Asn
    1025            1030            1035


Asp Cys  Gly Asp Tyr Ser Asp  Glu Thr His Ala Asn  Cys Thr Asn
    1040            1045            1050


Gln Ala  Thr Arg Pro Pro Gly  Gly Cys His Thr Asp  Glu Phe Gln
    1055            1060            1065


Cys Arg  Leu Asp Gly Leu Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    1070            1075            1080


Gly Asp  Thr Asp Cys Met Asp  Ser Ser Asp Glu Lys  Ser Cys Glu
    1085            1090            1095


Gly Val  Thr His Val Cys Asp  Pro Ser Val Lys Phe  Gly Cys Lys
    1100            1105            1110


Asp Ser  Ala Arg Cys Ile Ser  Lys Ala Trp Val Cys  Asp Gly Asp
    1115            1120            1125


Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130            1135            1140


Ala Cys  Arg Pro Pro Ser His  Pro Cys Ala Asn Asn  Thr Ser Val
    1145            1150            1155


Cys Leu  Pro Pro Asp Lys Leu  Cys Asp Gly Asn Asp  Asp Cys Gly
    1160            1165            1170
```

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Asp Gly  Ser Asp Glu Gly Glu  Leu Cys Asp Gln Cys  Ser Leu Asn
    1175             1180         1185

Asn Gly  Gly Cys Ser His Asn  Cys Ser Val Ala Pro  Gly Glu Gly
    1190             1195         1200

Ile Val  Cys Ser Cys Pro Leu  Gly Met Glu Leu Gly  Pro Asp Asn
    1205             1210         1215

His Thr  Cys Gln Ile Gln Ser  Tyr Cys Ala Lys His  Leu Lys Cys
    1220             1225         1230

Ser Gln  Lys Cys Asp Gln Asn  Lys Phe Ser Val Lys  Cys Ser Cys
    1235             1240         1245

Tyr Glu  Gly Trp Val Leu Glu  Pro Asp Gly Glu Ser  Cys Arg Ser
    1250             1255         1260

Leu Asp  Pro Phe Lys Pro Phe  Ile Ile Phe Ser Asn  Arg His Glu
    1265             1270         1275

Ile Arg  Arg Ile Asp Leu His  Lys Gly Asp Tyr Ser  Val Leu Val
    1280             1285         1290

Pro Gly  Leu Arg Asn Thr Ile  Ala Leu Asp Phe His  Leu Ser Gln
    1295             1300         1305

Ser Ala  Leu Tyr Trp Thr Asp  Val Val Glu Asp Lys  Ile Tyr Arg
    1310             1315         1320

Gly Lys  Leu Leu Asp Asn Gly  Ala Leu Thr Ser Phe  Glu Val Val
    1325             1330         1335

Ile Gln  Tyr Gly Leu Ala Thr  Pro Glu Gly Leu Ala  Val Asp Trp
    1340             1345         1350

Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355             1360         1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370             1375         1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385             1390         1395
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```
Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400             1405              1410

Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415             1420              1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430             1435              1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445             1450              1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460             1465              1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475             1480              1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490             1495              1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505             1510              1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520             1525              1530

Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535             1540              1545

Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550             1555              1560

Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565             1570              1575

Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580             1585              1590

Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595             1600              1605

Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610             1615              1620
```

```
Ala Arg  Glu Gln Arg Val Tyr  Trp Ser Asp Val Arg  Thr Gln Ala
    1625                1630              1635

Ile Lys  Arg Ala Phe Ile Asn  Gly Thr Gly Val Glu  Thr Val Val
    1640                1645              1650

Ser Ala  Asp Leu Pro Asn Ala  His Gly Leu Ala Val  Asp Trp Val
    1655                1660              1665

Ser Arg  Asn Leu Phe Trp Thr  Ser Tyr Asp Thr Asn  Lys Lys Gln
    1670                1675              1680

Ile Asn  Val Ala Arg Leu Asp  Gly Ser Phe Lys Asn  Ala Val Val
    1685                1690              1695

Gln Gly  Leu Glu Gln Pro His  Gly Leu Val Val His  Pro Leu Arg
    1700                1705              1710

Gly Lys  Leu Tyr Trp Thr Asp  Gly Asp Asn Ile Ser  Met Ala Asn
    1715                1720              1725

Met Asp  Gly Ser Asn Arg Thr  Leu Leu Phe Ser Gly  Gln Lys Gly
    1730                1735              1740

Pro Val  Gly Leu Ala Ile Asp  Phe Pro Glu Ser Lys  Leu Tyr Trp
    1745                1750              1755

Ile Ser  Ser Gly Asn His Thr  Ile Asn Arg Cys Asn  Leu Asp Gly
    1760                1765              1770

Ser Gly  Leu Glu Val Ile Asp  Ala Met Arg Ser Gln  Leu Gly Lys
    1775                1780              1785

Ala Thr  Ala Leu Ala Ile Met  Gly Asp Lys Leu Trp  Trp Ala Asp
    1790                1795              1800

Gln Val  Ser Glu Lys Met Gly  Thr Cys Ser Lys Ala  Asp Gly Ser
    1805                1810              1815

Gly Ser  Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820                1825              1830

Lys Val  Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835                1840              1845
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```
Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850             1855              1860

Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865             1870              1875

Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880             1885              1890

Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895             1900              1905

Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910             1915              1920

Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925             1930              1935

Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940             1945              1950

Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955             1960              1965

Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970             1975              1980

Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985             1990              1995

Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000             2005              2010

Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015             2020              2025

Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030             2035              2040

Val Val  Leu Val Asn Val Ser  Ile Ser Trp Pro Asn  Gly Ile Ser
    2045             2050              2055
  .

Val Asp  Tyr Gln Asp Gly Lys  Leu Tyr Trp Cys Asp  Ala Arg Thr
    2060             2065              2070
```

```
Asp Lys  Ile Glu Arg Ile Asp  Leu Glu Thr Gly Glu  Asn Arg Glu
    2075                2080             2085

Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090                2095             2100

Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105                2110             2115

Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120                2125             2130

Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135                2140             2145

Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150                2155             2160

Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165                2170             2175

Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180                2185             2190

Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195                2200             2205

Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210                2215             2220

Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala
    2225                2230             2235

Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240                2245             2250

Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255                2260             2265

Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270                2275             2280

Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285                2290             2295
```

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Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Gly Gly Arg
    2510   2515   2520

Leu Val   Pro Arg Gly Ser Tyr   Pro Tyr Asp Val Pro   Asp Tyr Ala
    2525   2530   2535

Ile Glu   Gly His Val Gly Leu   Asn Asp Ile Phe Glu   Ala Gln Lys
    2540   2545   2550

Ile Glu   Trp His Glu Gly His   His His His His His
    2555   2560   2565

<210>   7
<211>   2520
<212>   PRT
<213>   H. sapiens

<400>   7

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
        100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
    115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

```
Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180             185             190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195             200             205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
        210             215             220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
                245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280             285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415
```

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
            450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
            530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
            610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

```
Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660             665             670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675             680             685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690             695             700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705             710             715             720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725             730             735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
        740             745             750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755             760             765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770             775             780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785             790             795             800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805             810             815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820             825             830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835             840             845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850             855             860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865             870             875             880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885             890             895
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Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
              900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
              915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
              930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
              965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
              980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
         995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
    1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
    1130   1135   1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
    1145   1150   1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
    1160   1165   1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
    1175   1180   1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
    1190   1195   1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
    1205   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
    1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340   1345   1350

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Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355             1360             1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370             1375             1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385             1390             1395

Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400             1405             1410

Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415             1420             1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430             1435             1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445             1450             1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460             1465             1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475             1480             1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490             1495             1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505             1510             1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520             1525             1530

Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535             1540             1545

Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550             1555             1560

Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565             1570             1575
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```
Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580                 1585                 1590

Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595                 1600                 1605

Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610                 1615                 1620

Ala Arg  Glu Gln Arg Val Tyr  Trp Ser Asp Val Arg  Thr Gln Ala
    1625                 1630                 1635

Ile Lys  Arg Ala Phe Ile Asn  Gly Thr Gly Val Glu  Thr Val Val
    1640                 1645                 1650

Ser Ala  Asp Leu Pro Asn Ala  His Gly Leu Ala Val  Asp Trp Val
    1655                 1660                 1665

Ser Arg  Asn Leu Phe Trp Thr  Ser Tyr Asp Thr Asn  Lys Lys Gln
    1670                 1675                 1680

Ile Asn  Val Ala Arg Leu Asp  Gly Ser Phe Lys Asn  Ala Val Val
    1685                 1690                 1695

Gln Gly  Leu Glu Gln Pro His  Gly Leu Val Val His  Pro Leu Arg
    1700                 1705                 1710

Gly Lys  Leu Tyr Trp Thr Asp  Gly Asp Asn Ile Ser  Met Ala Asn
    1715                 1720                 1725

Met Asp  Gly Ser Asn Arg Thr  Leu Leu Phe Ser Gly  Gln Lys Gly
    1730                 1735                 1740

Pro Val  Gly Leu Ala Ile Asp  Phe Pro Glu Ser Lys  Leu Tyr Trp
    1745                 1750                 1755

Ile Ser  Ser Gly Asn His Thr  Ile Asn Arg Cys Asn  Leu Asp Gly
    1760                 1765                 1770

Ser Gly  Leu Glu Val Ile Asp  Ala Met Arg Ser Gln  Leu Gly Lys
    1775                 1780                 1785

Ala Thr  Ala Leu Ala Ile Met  Gly Asp Lys Leu Trp  Trp Ala Asp
    1790                 1795                 1800
```

```
Gln Val  Ser Glu Lys Met Gly  Thr Cys Ser Lys Ala  Asp Gly Ser
    1805              1810              1815

Gly Ser  Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820              1825              1830

Lys Val  Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835              1840              1845

Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850              1855              1860

Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865              1870              1875

Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880              1885              1890

Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895              1900              1905

Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910              1915              1920

Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925              1930              1935

Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940              1945              1950

Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955         .        1960              1965

Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970              1975              1980

Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985              1990              1995

Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000              2005              2010

Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015              2020              2025
```

Gln Tyr   Pro Arg Ile Glu Arg   Ser Arg Leu Asp Gly   Thr Glu Arg
    2030   2035   2040

Val Val   Leu Val Asn Val Ser   Ile Ser Trp Pro Asn   Gly Ile Ser
    2045   2050   2055

Val Asp   Tyr Gln Asp Gly Lys   Leu Tyr Trp Cys Asp   Ala Arg Thr
    2060   2065   2070

Asp Lys   Ile Glu Arg Ile Asp   Leu Glu Thr Gly Glu   Asn Arg Glu
    2075   2080   2085

Val Val   Leu Ser Ser Asn Asn   Met Asp Met Phe Ser   Val Ser Val
    2090   2095   2100

Phe Glu   Asp Phe Ile Tyr Trp   Ser Asp Arg Thr His   Ala Asn Gly
    2105   2110   2115

Ser Ile   Lys Arg Gly Ser Lys   Asp Asn Ala Thr Asp   Ser Val Pro
    2120   2125   2130

Leu Arg   Thr Gly Ile Gly Val   Gln Leu Lys Asp Ile   Lys Val Phe
    2135   2140   2145

Asn Arg   Asp Arg Gln Lys Gly   Thr Asn Val Cys Ala   Val Ala Asn
    2150   2155   2160

Gly Gly   Cys Gln Gln Leu Cys   Leu Tyr Arg Gly Arg   Gly Gln Arg
    2165   2170   2175

Ala Cys   Ala Cys Ala His Gly   Met Leu Ala Glu Asp   Gly Ala Ser
    2180   2185   2190

Cys Arg   Glu Tyr Ala Gly Tyr   Leu Leu Tyr Ser Glu   Arg Thr Ile
    2195   2200   2205

Leu Lys   Ser Ile His Leu Ser   Asp Glu Arg Asn Leu   Asn Ala Pro
    2210   2215   2220

Val Gln   Pro Phe Glu Asp Pro   Glu His Met Lys Asn   Val Ile Ala
    2225   2230   2235

Leu Ala   Phe Asp Tyr Arg Ala   Gly Thr Ser Pro Gly   Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser   Pro Cys Arg Ile Asn   Asn Gly Gly Cys Gln   Asp Leu Cys
   2480   2485   2490

Leu Leu   Thr His Gln Gly His   Val Asn Cys Ser Cys   Arg Gly Gly
   2495   2500   2505

Arg Ile   Leu Gln Asp Asp Leu   Thr Cys Arg Ala Val
   2510   2515   2520

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<213> H. sapiens

<400> 8

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

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Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180                 185             190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195             200                 205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210                 215                 220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225                 230                 235                 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245                 250                 255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260                 265                 270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275                 280                 285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290                 295                 300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305                 310                 315                 320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325                 330                 335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340                 345                 350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355                 360                 365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370                 375                 380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385                 390                 395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405                 410                 415
```

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
            450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
                485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
                565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

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Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
        660             665             670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675             680             685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690             695             700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705             710             715             720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
                725             730             735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740             745             750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755             760             765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770             775             780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785             790             795             800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805             810             815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820             825             830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835             840             845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850             855             860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865             870             875             880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885             890             895
```

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
        900   905   910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915   920   925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930   935   940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945   950   955   960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
            980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
        995   1000   1005   .

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
    1115   1120   1125

```
Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130             1135             1140

Ala Cys  Arg Pro Pro Ser His  Pro Cys Ala Asn Asn  Thr Ser Val
    1145             1150             1155

Cys Leu  Pro Pro Asp Lys Leu  Cys Asp Gly Asn Asp  Asp Cys Gly
    1160             1165             1170

Asp Gly  Ser Asp Glu Gly Glu  Leu Cys Asp Gln Cys  Ser Leu Asn
    1175             1180             1185

Asn Gly  Gly Cys Ser His Asn  Cys Ser Val Ala Pro  Gly Glu Gly
    1190             1195             1200

Ile Val  Cys Ser Cys Pro Leu  Gly Met Glu Leu Gly  Pro Asp Asn
    1205             1210             1215

His Thr  Cys Gln Ile Gln Ser  Tyr Cys Ala Lys His  Leu Lys Cys
    1220             1225             1230

Ser Gln  Lys Cys Asp Gln Asn  Lys Phe Ser Val Lys  Cys Ser Cys
    1235             1240             1245

Tyr Glu  Gly Trp Val Leu Glu  Pro Asp Gly Glu Ser  Cys Arg Ser
    1250             1255             1260

Leu Asp  Pro Phe Lys Pro Phe  Ile Ile Phe Ser Asn  Arg His Glu
    1265             1270             1275

Ile Arg  Arg Ile Asp Leu His  Lys Gly Asp Tyr Ser  Val Leu Val
    1280             1285             1290

Pro Gly  Leu Arg Asn Thr Ile  Ala Leu Asp Phe His  Leu Ser Gln
    1295             1300             1305

Ser Ala  Leu Tyr Trp Thr Asp  Val Val Glu Asp Lys  Ile Tyr Arg
    1310             1315             1320

Gly Lys  Leu Leu Asp Asn Gly  Ala Leu Thr Ser Phe  Glu Val Val
    1325             1330             1335

Ile Gln  Tyr Gly Leu Ala Thr  Pro Glu Gly Leu Ala  Val Asp Trp
    1340             1345             1350
```

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Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355                1360             1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370                1375             1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385                1390             1395

Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400                1405             1410

Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415                1420             1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430                1435             1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445                1450             1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460                1465             1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475                1480             1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490                1495             1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505                1510             1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520                1525             1530

Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535                1540             1545

Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550                1555             1560

Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565                1570             1575
```

```
Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580             1585             1590


Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595             1600             1605


Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610             1615             1620


Ala Arg  Glu Gln Arg Val Tyr  Trp Ser Asp Val Arg  Thr Gln Ala
    1625             1630             1635


Ile Lys  Arg Ala Phe Ile Asn  Gly Thr Gly Val Glu  Thr Val Val
    1640             1645             1650


Ser Ala  Asp Leu Pro Asn Ala  His Gly Leu Ala Val  Asp Trp Val
    1655             1660             1665


Ser Arg  Asn Leu Phe Trp Thr  Ser Tyr Asp Thr Asn  Lys Lys Gln
    1670             1675             1680


Ile Asn  Val Ala Arg Leu Asp  Gly Ser Phe Lys Asn  Ala Val Val
    1685             1690             1695


Gln Gly  Leu Glu Gln Pro His  Gly Leu Val Val His  Pro Leu Arg
    1700             1705             1710


Gly Lys  Leu Tyr Trp Thr Asp  Gly Asp Asn Ile Ser  Met Ala Asn
    1715             1720             1725


Met Asp  Gly Ser Asn Arg Thr  Leu Leu Phe Ser Gly  Gln Lys Gly
    1730             1735             1740


Pro Val  Gly Leu Ala Ile Asp  Phe Pro Glu Ser Lys  Leu Tyr Trp
    1745             1750             1755


Ile Ser  Ser Gly Asn His Thr  Ile Asn Arg Cys Asn  Leu Asp Gly
    1760             1765             1770


Ser Gly  Leu Glu Val Ile Asp  Ala Met Arg Ser Gln  Leu Gly Lys
    1775             1780             1785


Ala Thr  Ala Leu Ala Ile Met  Gly Asp Lys Leu Trp  Trp Ala Asp
    1790             1795             1800
```

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
    1820   1825   1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
    1835   1840   1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
    1850   1855   1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

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Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030             2035             2040

Val Val  Leu Val Asn Val Ser  Ile Ser Trp Pro Asn  Gly Ile Ser
    2045             2050             2055

Val Asp  Tyr Gln Asp Gly Lys  Leu Tyr Trp Cys Asp  Ala Arg Thr
    2060             2065             2070

Asp Lys  Ile Glu Arg Ile Asp  Leu Glu Thr Gly Glu  Asn Arg Glu
    2075             2080             2085

Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090             2095             2100

Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105             2110             2115

Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120             2125             2130

Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135             2140             2145

Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150             2155             2160

Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165             2170             2175

Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180             2185             2190

Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195             2200             2205

Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210             2215             2220

Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala
    2225             2230             2235

Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240             2245             2250
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Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255             2260             2265

Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270             2275             2280

Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285             2290             2295

Trp Thr  Ser Tyr Thr Thr Ser  Thr Ile Thr Arg His  Thr Val Asp
    2300             2305             2310

Gln Thr  Arg Pro Gly Ala Phe  Glu Arg Glu Thr Val  Ile Thr Met
    2315             2320             2325

Ser Gly  Asp Asp His Pro Arg  Ala Phe Val Leu Asp  Glu Cys Gln
    2330             2335             2340

Asn Leu  Met Phe Trp Thr Asn  Trp Asn Glu Gln His  Pro Ser Ile
    2345             2350             2355

Met Arg  Ala Ala Leu Ser Gly  Ala Asn Val Leu Thr  Leu Ile Glu
    2360             2365             2370

Lys Asp  Ile Arg Thr Pro Asn  Gly Leu Ala Ile Asp  His Arg Ala
    2375             2380             2385

Glu Lys  Leu Tyr Phe Ser Asp  Ala Thr Leu Asp Lys  Ile Glu Arg
    2390             2395             2400

Cys Glu  Tyr Asp Gly Ser His  Arg Tyr Val Ile Leu  Lys Ser Glu
    2405             2410             2415

Pro Val  His Pro Phe Gly Leu  Ala Val Tyr Gly Glu  His Ile Phe
    2420             2425             2430

Trp Thr  Asp Trp Val Arg Arg  Ala Val Gln Arg Ala  Asn Lys His
    2435             2440             2445

Val Gly  Ser Asn Met Lys Leu  Leu Arg Val Asp Ile  Pro Gln Gln
    2450             2455             2460

Pro Met  Gly Ile Ile Ala Val  Ala Asn Asp Thr Asn  Ser Cys Glu
    2465             2470             2475
```

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys Asp Lys Gly Arg
    3110   3115   3120

Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr Arg Thr Val
    3125   3130   3135

Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val Val Asp
    3140   3145   3150

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Val Gln  Asn Gly Tyr Leu Tyr  Trp Thr Asp Trp Gly  Asp His Ser
    3155                 3160             3165

Leu Ile  Gly Arg Ile Gly Met  Asp Gly Ser Ser Arg  Ser Val Ile
    3170                 3175             3180

Val Asp  Thr Lys Ile Thr Trp  Pro Asn Gly Leu Thr  Leu Asp Tyr
    3185                 3190             3195

Val Thr  Glu Arg Ile Tyr Trp  Ala Asp Ala Arg Glu  Asp Tyr Ile
    3200                 3205             3210

Glu Phe  Ala Ser Leu Asp Gly  Ser Asn Arg His Val  Val Leu Ser
    3215                 3220             3225

Gln Asp  Ile Pro His Ile Phe  Ala Leu Thr Leu Phe  Glu Asp Tyr
    3230                 3235             3240

Val Tyr  Trp Thr Asp Trp Glu  Thr Lys Ser Ile Asn  Arg Ala His
    3245                 3250             3255

Lys Thr  Thr Gly Thr Asn Lys  Thr Leu Leu Ile Ser  Thr Leu His
  ' 3260                 3265             3270

Arg Pro  Met Asp Leu His Val  Phe His Ala Leu Arg  Gln Pro Asp
    3275                 3280             3285

Val Pro  Asn His Pro Cys Lys  Val Asn Asn Gly Gly  Cys Ser Asn
    3290                 3295             3300

Leu Cys  Leu Leu Ser Pro Gly  Gly Gly His Lys Cys  Ala Cys Pro
    3305                 3310             3315

Thr Asn  Phe Tyr Leu Gly Ser  Asp Gly Arg Thr Cys  Val Ser Asn
    3320                 3325             3330

Cys Thr  Ala Ser Gln Phe Val  Cys Lys Asn Asp Lys  Cys Ile Pro
    3335                 3340             3345

Phe Trp  Trp Lys Cys Asp Thr  Glu Asp Asp Cys Gly  Asp His Ser
    3350                 3355             3360

Asp Glu  Pro Pro Asp Cys Pro  Glu Phe Lys Cys Arg  Pro Gly Gln
    3365                 3370             3375
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Phe Gln   Cys Ser Thr Gly Ile   Cys Thr Asn Pro Ala   Phe Ile Cys
    3380                  3385                  3390


Asp Gly   Asp Asn Asp Cys Gln   Asp Asn Ser Asp Glu   Ala Asn Cys
    3395                  3400                  3405


Asp Ile   His Val Cys Leu Pro   Ser Gln Phe Lys Cys   Thr Asn Thr
    3410                  3415                  3420

                                                 .
Asn Arg   Cys Ile Pro Gly Ile   Phe Arg Cys Asn Gly   Gln Asp Asn
    3425                  3430                  3435


Cys Gly   Asp Gly Glu Asp Glu   Arg Asp Cys Pro Glu   Val Thr Cys
    3440                  3445                  3450


Ala Pro   Asn Gln Phe Gln Cys   Ser Ile Thr Lys Arg   Cys Ile Pro
    3455                  3460                  3465


Arg Val   Trp Val Cys Asp Arg   Asp Asn Asp Cys Val   Asp Gly Ser
    3470                  3475                  3480


Asp Glu   Pro Ala Asn Cys Thr   Gln Met Thr Cys Gly   Val Asp Glu
    3485                  3490                  3495


Phe Arg   Cys Lys Asp Ser Gly   Arg Cys Ile Pro Ala   Arg Trp Lys
  ' 3500                  3505                  3510


Cys Asp   Gly Glu Asp Asp Cys   Gly Asp Gly Ser Asp   Glu Pro Lys
    3515                  3520                  3525


Glu Glu   Cys Asp Glu Arg Thr   Cys Glu Pro Tyr Gln   Phe Arg Cys
    3530                  3535                  3540


Lys Asn   Asn Arg Cys Val Pro   Gly Arg Trp Gln Cys   Asp Tyr Asp
    3545                  3550                  3555


Asn Asp   Cys Gly Asp Asn Ser   Asp Glu Glu Ser Cys   Thr Pro Arg
    3560                  3565                  3570


Pro Cys   Ser Glu Ser Glu Phe   Ser Cys Ala Asn Gly   Arg Cys Ile
    3575                  3580                  3585


Ala Gly   Arg Trp Lys Cys Asp   Gly Asp His Asp Cys   Ala Asp Gly
    3590                  3595                  3600
```

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
    3605   3610   3615

Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
    3620   3625   3630

Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
    3635   3640   3645

Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
    3650   3655   3660

Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp
    3665   3670   3675

Cys Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe
    3680   3685   3690

Val Cys Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val
    3695   3700   3705

Cys Leu Trp Ile Gly Arg Gln Cys Asp Gly Thr Asp Asn Cys Gly
    3710   3715   3720

Asp Gly Thr Asp Glu Glu Asp Cys Glu Pro Pro Thr Ala His Thr
    3725   3730   3735

Thr His Cys Lys Asp Lys Lys Glu Phe Leu Cys Arg Asn Gln Arg
    3740   3745   3750

Cys Leu Ser Ser Ser Leu Arg Cys Asn Met Phe Asp Asp Cys Gly
    3755   3760   3765

Asp Gly Ser Asp Glu Glu Asp Cys Ser Ile Asp Pro Lys Leu Thr
    3770   3775   3780

Ser Cys Ala Thr Asn Ala Ser Ile Cys Gly Asp Glu Ala Arg Cys
    3785   3790   3795

Val Arg Thr Glu Lys Ala Ala Tyr Cys Ala Cys Arg Ser Gly Phe
    3800   3805   3810

His Thr Val Pro Gly Gln Pro Gly Cys Gln Asp Ile Asn Glu Cys
    3815   3820   3825

Leu Arg Phe Gly Thr Cys Ser Gln Leu Cys Asn Asn Thr Lys Gly
    3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
    3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
    3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

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Asn Ser   Thr Cys Thr Val Asn   Gln Gly Asn Gln Pro   Gln Cys Arg
    4280                  4285               4290

Cys Leu   Pro Gly Phe Leu Gly   Asp Arg Cys Gln Tyr   Arg Gln Cys
    4295                  4300               4305

Ser Gly   Tyr Cys Glu Asn Phe   Gly Thr Cys Gln Met   Ala Ala Asp
    4310                  4315               4320

Gly Ser   Arg Gln Cys Arg Cys   Thr Ala Tyr Phe Glu   Gly Ser Arg
    4325                  4330               4335

Cys Glu   Val Asn Lys Cys Ser   Arg Cys Leu Glu Gly   Ala Cys Val
    4340                  4345               4350

Val Asn   Lys Gln Ser Gly Asp   Val Thr Cys Asn Cys   Thr Asp Gly
    4355                  4360               4365

Arg Val   Ala Pro Ser Cys Leu   Thr Cys Val Gly His   Cys Ser Asn
    4370                  4375               4380

Gly Gly   Ser Cys Thr Met Asn   Ser Lys Met Met Pro   Glu Cys Gln
    4385                  4390               4395

Cys Pro   Pro His Met Thr Gly   Pro Arg Cys Glu Glu   His Val Phe
    4400                  4405               4410

Ser Gln   Gln Gln Pro Gly Gly   Gly Arg Leu Val Pro   Arg Gly Ser
    4415                  4420               4425

Tyr Pro   Tyr Asp Val Pro Asp   Tyr Ala Ile Glu Gly   His Val Gly
    4430                  4435               4440

Leu Asn   Asp Ile Phe Glu Ala   Gln Lys Ile Glu Trp   His Glu Gly
    4445                  4450               4455


His His   His His His His
    4460


<210>   9
<211>   4419
<212>   PRT
<213>   H. sapiens
```

<400> 9

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
        100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
        180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

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Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
              245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
              260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
              275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
              325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
              340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
              355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
              405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
              420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
              435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
             485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
             500   505   510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
             515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
             565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
             580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
             595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
             645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
             660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
             675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
             690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

```
Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725              730            735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740              745            750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755              760            765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770              775            780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785              790            795                800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805              810            815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820              825            830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835              840            845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850              855            860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865              870            875                880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885              890            895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
        900              905            910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915              920            925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930              935            940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945              950            955                960
```

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
           965   970   975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
           980   985   990

Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
           995   1000   1005

Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
    1010   1015   1020

Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    1025   1030   1035

Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn
    1040   1045   1050

Gln Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln
    1055   1060   1065

Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp
    1070   1075   1080

Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu
    1085   1090   1095

Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys
    1100   1105   1110

Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly Asp
    1115   1120   1125

Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
    1130   1135   1140

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
    1145   1150   1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
    1160   1165   1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
    1175   1180   1185

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Asn Gly  Gly Cys Ser His Asn  Cys Ser Val Ala Pro  Gly Glu Gly
    1190                 1195                 1200

Ile Val  Cys Ser Cys Pro Leu  Gly Met Glu Leu Gly  Pro Asp Asn
    1205                 1210                 1215

His Thr  Cys Gln Ile Gln Ser  Tyr Cys Ala Lys His  Leu Lys Cys
    1220                 1225                 1230

Ser Gln  Lys Cys Asp Gln Asn  Lys Phe Ser Val Lys  Cys Ser Cys
    1235                 1240                 1245

Tyr Glu  Gly Trp Val Leu Glu  Pro Asp Gly Glu Ser  Cys Arg Ser
    1250                 1255                 1260

Leu Asp  Pro Phe Lys Pro Phe  Ile Ile Phe Ser Asn  Arg His Glu
    1265                 1270                 1275

Ile Arg  Arg Ile Asp Leu His  Lys Gly Asp Tyr Ser  Val Leu Val
    1280                 1285                 1290

Pro Gly  Leu Arg Asn Thr Ile  Ala Leu Asp Phe His  Leu Ser Gln
    1295                 1300                 1305

Ser Ala  Leu Tyr Trp Thr Asp  Val Val Glu Asp Lys  Ile Tyr Arg
    1310                 1315                 1320

Gly Lys  Leu Leu Asp Asn Gly  Ala Leu Thr Ser Phe  Glu Val Val
    1325                 1330                 1335

Ile Gln  Tyr Gly Leu Ala Thr  Pro Glu Gly Leu Ala  Val Asp Trp
    1340                 1345                 1350

Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355                 1360                 1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370                 1375                 1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385                 1390                 1395

Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400                 1405                 1410
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Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415             1420                 1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430             1435                 1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445             1450                 1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460             1465                 1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475             1480                 1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490             1495                 1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505             1510                 1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520             1525                 1530

Pro Met  Ala Pro Asn Pro Cys  Glu Ala Asn Gly Gly  Gln Gly Pro
    1535             1540                 1545

Cys Ser  His Leu Cys Leu Ile  Asn Tyr Asn Arg Thr  Val Ser Cys
    1550      .          1555                 1560

Ala Cys  Pro His Leu Met Lys  Leu His Lys Asp Asn  Thr Thr Cys
    1565             1570                 1575

Tyr Glu  Phe Lys Lys Phe Leu  Leu Tyr Ala Arg Gln  Met Glu Ile
    1580             1585                 1590

Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595             1600                 1605

Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610             1615                 1620

Ala Arg  Glu Gln Arg Val Tyr  Trp Ser Asp Val Arg  Thr Gln Ala
    1625             1630                 1635
```

```
Ile Lys   Arg Ala Phe Ile Asn   Gly Thr Gly Val Glu   Thr Val Val
    1640                  1645                  1650


Ser Ala   Asp Leu Pro Asn Ala   His Gly Leu Ala Val   Asp Trp Val
    1655                  1660                  1665


Ser Arg   Asn Leu Phe Trp Thr   Ser Tyr Asp Thr Asn   Lys Lys Gln
    1670                  1675                  1680


Ile Asn   Val Ala Arg Leu Asp   Gly Ser Phe Lys Asn   Ala Val Val
    1685                  1690                  1695


Gln Gly   Leu Glu Gln Pro His   Gly Leu Val Val His   Pro Leu Arg
    1700                  1705                  1710


Gly Lys   Leu Tyr Trp Thr Asp   Gly Asp Asn Ile Ser   Met Ala Asn
    1715                  1720                  1725


Met Asp   Gly Ser Asn Arg Thr   Leu Leu Phe Ser Gly   Gln Lys Gly
    1730                  1735                  1740


Pro Val   Gly Leu Ala Ile Asp   Phe Pro Glu Ser Lys   Leu Tyr Trp
    1745                  1750                  1755


Ile Ser   Ser Gly Asn His Thr   Ile Asn Arg Cys Asn   Leu Asp Gly
    1760                  1765                  1770


Ser Gly   Leu Glu Val Ile Asp   Ala Met Arg Ser Gln   Leu Gly Lys
    1775                  1780                  1785


Ala Thr   Ala Leu Ala Ile Met   Gly Asp Lys Leu Trp   Trp Ala Asp
    1790                  1795                  1800


Gln Val   Ser Glu Lys Met Gly   Thr Cys Ser Lys Ala   Asp Gly Ser
    1805                  1810                  1815


Gly Ser   Val Val Leu Arg Asn   Ser Thr Thr Leu Val   Met His Met
    1820                  1825                  1830


Lys Val   Tyr Asp Glu Ser Ile   Gln Leu Asp His Lys   Gly Thr Asn
    1835                  1840                  1845


Pro Cys   Ser Val Asn Asn Gly   Asp Cys Ser Gln Leu   Cys Leu Pro
    1850                  1855                  1860
```

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

```
Val Val  Leu Ser Ser Asn Asn  Met Asp Met Phe Ser  Val Ser Val
    2090                2095                2100

Phe Glu  Asp Phe Ile Tyr Trp  Ser Asp Arg Thr His  Ala Asn Gly
    2105                2110                2115

Ser Ile  Lys Arg Gly Ser Lys  Asp Asn Ala Thr Asp  Ser Val Pro
    2120                2125                2130

Leu Arg  Thr Gly Ile Gly Val  Gln Leu Lys Asp Ile  Lys Val Phe
    2135                2140                2145

Asn Arg  Asp Arg Gln Lys Gly  Thr Asn Val Cys Ala  Val Ala Asn
    2150                2155                2160

Gly Gly  Cys Gln Gln Leu Cys  Leu Tyr Arg Gly Arg  Gly Gln Arg
    2165                2170                2175

Ala Cys  Ala Cys Ala His Gly  Met Leu Ala Glu Asp  Gly Ala Ser
    2180                2185                2190

Cys Arg  Glu Tyr Ala Gly Tyr  Leu Leu Tyr Ser Glu  Arg Thr Ile
    2195                2200                2205

Leu Lys  Ser Ile His Leu Ser  Asp Glu Arg Asn Leu  Asn Ala Pro
    2210                2215                2220

Val Gln  Pro Phe Glu Asp Pro  Glu His Met Lys Asn  Val Ile Ala
    2225                2230                2235

Leu Ala  Phe Asp Tyr Arg Ala  Gly Thr Ser Pro Gly  Thr Pro Asn
    2240                2245                2250

Arg Ile  Phe Phe Ser Asp Ile  His Phe Gly Asn Ile  Gln Gln Ile
    2255                2260                2265

Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270                2275                2280

Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285                2290                2295

Trp Thr  Ser Tyr Thr Thr Ser  Thr Ile Thr Arg His  Thr Val Asp
    2300                2305                2310
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Gln Thr  Arg Pro Gly Ala Phe  Glu Arg Glu Thr Val  Ile Thr Met
    2315             2320              2325

Ser Gly  Asp Asp His Pro Arg  Ala Phe Val Leu Asp  Glu Cys Gln
    2330             2335              2340

Asn Leu  Met Phe Trp Thr Asn  Trp Asn Glu Gln His  Pro Ser Ile
    2345             2350              2355

Met Arg  Ala Ala Leu Ser Gly  Ala Asn Val Leu Thr  Leu Ile Glu
    2360             2365              2370

Lys Asp  Ile Arg Thr Pro Asn  Gly Leu Ala Ile Asp  His Arg Ala
    2375             2380              2385

Glu Lys  Leu Tyr Phe Ser Asp  Ala Thr Leu Asp Lys  Ile Glu Arg
    2390             2395              2400

Cys Glu  Tyr Asp Gly Ser His  Arg Tyr Val Ile Leu  Lys Ser Glu
    2405             2410              2415

Pro Val  His Pro Phe Gly Leu  Ala Val Tyr Gly Glu  His Ile Phe
    2420             2425              2430

Trp Thr  Asp Trp Val Arg Arg  Ala Val Gln Arg Ala  Asn Lys His
    2435             2440              2445

Val Gly  Ser Asn Met Lys Leu  Leu Arg Val Asp Ile  Pro Gln Gln
    2450             2455              2460

Pro Met  Gly Ile Ile Ala Val  Ala Asn Asp Thr Asn  Ser Cys Glu
    2465             2470              2475

Leu Ser  Pro Cys Arg Ile Asn  Asn Gly Gly Cys Gln  Asp Leu Cys
    2480             2485              2490

Leu Leu  Thr His Gln Gly His  Val Asn Cys Ser Cys  Arg Gly Gly
    2495             2500              2505

Arg Ile  Leu Gln Asp Asp Leu  Thr Cys Arg Ala Val  Asn Ser Ser
    2510             2515              2520

Cys Arg  Ala Gln Asp Glu Phe  Glu Cys Ala Asn Gly  Glu Cys Ile
    2525             2530              2535
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Asn Phe  Ser Leu Thr Cys Asp  Gly Val Pro His Cys  Lys Asp Lys
    2540             2545             2550

Ser Asp  Glu Lys Pro Ser Tyr  Cys Asn Ser Arg Arg  Cys Lys Lys
    2555             2560             2565

Thr Phe  Arg Gln Cys Ser Asn  Gly Arg Cys Val Ser  Asn Met Leu
    2570             2575             2580

Trp Cys  Asn Gly Ala Asp Asp  Cys Gly Asp Gly Ser  Asp Glu Ile
    2585             2590             2595

Pro Cys  Asn Lys Thr Ala Cys  Gly Val Gly Glu Phe  Arg Cys Arg
    2600             2605             2610

Asp Gly  Thr Cys Ile Gly Asn  Ser Ser Arg Cys Asn  Gln Phe Val
    2615             2620             2625

Asp Cys  Glu Asp Ala Ser Asp  Glu Met Asn Cys Ser  Ala Thr Asp
    2630             2635             2640

Cys Ser  Ser Tyr Phe Arg Leu  Gly Val Lys Gly Val  Leu Phe Gln
    2645             2650             2655

Pro Cys  Glu Arg Thr Ser Leu  Cys Tyr Ala Pro Ser  Trp Val Cys
    2660             2665             2670

Asp Gly  Ala Asn Asp Cys Gly  Asp Tyr Ser Asp Glu  Arg Asp Cys
    2675             2680             2685

Pro Gly  Val Lys Arg Pro Arg  Cys Pro Leu Asn Tyr  Phe Ala Cys
    2690             2695             2700

Pro Ser  Gly Arg Cys Ile Pro  Met Ser Trp Thr Cys  Asp Lys Glu
    2705             2710             2715

Asp Asp  Cys Glu His Gly Glu  Asp Glu Thr His Cys  Asn Lys Phe
    2720             2725             2730

Cys Ser  Glu Ala Gln Phe Glu  Cys Gln Asn His Arg  Cys Ile Ser
    2735             2740             2745

Lys Gln  Trp Leu Cys Asp Gly  Ser Asp Asp Cys Gly  Asp Gly Ser
    2750             2755             2760
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Asp Glu  Ala Ala His Cys Glu  Gly Lys Thr Cys Gly  Pro Ser Ser
    2765              2770              2775

Phe Ser  Cys Pro Gly Thr His  Val Cys Val Pro Glu  Arg Trp Leu
    2780              2785              2790

Cys Asp  Gly Asp Lys Asp Cys  Ala Asp Gly Ala Asp  Glu Ser Ile
    2795              2800              2805

Ala Ala  Gly Cys Leu Tyr Asn  Ser Thr Cys Asp Asp  Arg Glu Phe
    2810              2815              2820

Met Cys  Gln Asn Arg Gln Cys  Ile Pro Lys His Phe  Val Cys Asp
    2825              2830              2835

His Asp  Arg Asp Cys Ala Asp  Gly Ser Asp Glu Ser  Pro Glu Cys
    2840              2845              2850

Glu Tyr  Pro Thr Cys Gly Pro  Ser Glu Phe Arg Cys  Ala Asn Gly
    2855              2860              2865

Arg Cys  Leu Ser Ser Arg Gln  Trp Glu Cys Asp Gly  Glu Asn Asp
    2870              2875              2880

Cys His  Asp Gln Ser Asp Glu  Ala Pro Lys Asn Pro  His Cys Thr
    2885              2890              2895

Ser Pro  Glu His Lys Cys Asn  Ala Ser Ser Gln Phe  Leu Cys Ser
    2900              2905              2910

Ser Gly  Arg Cys Val Ala Glu  Ala Leu Leu Cys Asn  Gly Gln Asp
    2915              2920              2925

Asp Cys  Gly Asp Ser Ser Asp  Glu Arg Gly Cys His  Ile Asn Glu
    2930              2935              2940

Cys Leu  Ser Arg Lys Leu Ser  Gly Cys Ser Gln Asp  Cys Glu Asp
    2945              2950              2955

Leu Lys  Ile Gly Phe Lys Cys  Arg Cys Arg Pro Gly  Phe Arg Leu
    2960              2965              2970

Lys Asp  Asp Gly Arg Thr Cys  Ala Asp Val Asp Glu  Cys Ser Thr
    2975              2980              2985
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Thr Phe  Pro Cys Ser Gln Arg  Cys Ile Asn Thr His  Gly Ser Tyr
    2990             2995              3000

Lys Cys  Leu Cys Val Glu Gly  Tyr Ala Pro Arg Gly  Gly Asp Pro
    3005             3010              3015

His Ser  Cys Lys Ala Val Thr  Asp Glu Glu Pro Phe  Leu Ile Phe
    3020             3025              3030

Ala Asn  Arg Tyr Tyr Leu Arg  Lys Leu Asn Leu Asp  Gly Ser Asn
    3035             3040              3045

Tyr Thr  Leu Leu Lys Gln Gly  Leu Asn Asn Ala Val  Ala Leu Asp
    3050             3055              3060

Phe Asp  Tyr Arg Glu Gln Met  Ile Tyr Trp Thr Asp  Val Thr Thr
    3065             3070              3075

Gln Gly  Ser Met Ile Arg Arg  Met His Leu Asn Gly  Ser Asn Val
    3080             3085              3090

Gln Val  Leu His Arg Thr Gly  Leu Ser Asn Pro Asp  Gly Leu Ala
    3095             3100              3105

Val Asp  Trp Val Gly Gly Asn  Leu Tyr Trp Cys Asp  Lys Gly Arg
    3110             3115              3120

Asp Thr  Ile Glu Val Ser Lys  Leu Asn Gly Ala Tyr  Arg Thr Val
    3125             3130              3135

Leu Val  Ser Ser Gly Leu Arg  Glu Pro Arg Ala Leu  Val Val Asp
    3140             3145              3150

Val Gln  Asn Gly Tyr Leu Tyr  Trp Thr Asp Trp Gly  Asp His Ser
    3155             3160              3165

Leu Ile  Gly Arg Ile Gly Met  Asp Gly Ser Ser Arg  Ser Val Ile
    3170             3175              3180

Val Asp  Thr Lys Ile Thr Trp  Pro Asn Gly Leu Thr  Leu Asp Tyr
    3185             3190              3195

Val Thr  Glu Arg Ile Tyr Trp  Ala Asp Ala Arg Glu  Asp Tyr Ile
    3200             3205              3210
```

Glu Phe Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser
    3215   3220   3225

Gln Asp Ile Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr
    3230   3235   3240

Val Tyr Trp Thr Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His
    3245   3250   3255

Lys Thr Thr Gly Thr Asn Lys Thr Leu Leu Ile Ser Thr Leu His
    3260   3265   3270

Arg Pro Met Asp Leu His Val Phe His Ala Leu Arg Gln Pro Asp
    3275   3280   3285

Val Pro Asn His Pro Cys Lys Val Asn Asn Gly Gly Cys Ser Asn
    3290   3295   3300

Leu Cys Leu Leu Ser Pro Gly Gly Gly His Lys Cys Ala Cys Pro
    3305   3310   3315

Thr Asn Phe Tyr Leu Gly Ser Asp Gly Arg Thr Cys Val Ser Asn
    3320   3325   3330

Cys Thr Ala Ser Gln Phe Val Cys Lys Asn Asp Lys Cys Ile Pro
    3335   3340   3345

Phe Trp Trp Lys Cys Asp Thr Glu Asp Asp Cys Gly Asp His Ser
    3350   3355   3360

Asp Glu Pro Pro Asp Cys Pro Glu Phe Lys Cys Arg Pro Gly Gln
    3365   3370   3375

Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe Ile Cys
    3380   3385   3390

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
    3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
    3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
    3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
    3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
    3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
    3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
    3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
    3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
    3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
    3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
    3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
    3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
    3575   3580   3585

Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
    3590   3595   3600

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
    3605   3610   3615

Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Arg Cys Asp
    3620   3625   3630

Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys Gly
    3635   3640   3645

Thr Gly Val Arg Thr Cys Pro Leu Asp Glu Phe Gln Cys Asn Asn
    3650   3655   3660

```
Thr Leu  Cys Lys Pro Leu Ala  Trp Lys Cys Asp Gly  Glu Asp Asp
    3665                3670             3675

Cys Gly  Asp Asn Ser Asp Glu  Asn Pro Glu Glu Cys  Ala Arg Phe
    3680                3685 .           3690

Val Cys  Pro Pro Asn Arg Pro  Phe Arg Cys Lys Asn  Asp Arg Val
    3695                3700             3705

Cys Leu  Trp Ile Gly Arg Gln  Cys Asp Gly Thr Asp  Asn Cys Gly
    3710                3715             3720

Asp Gly  Thr Asp Glu Glu Asp  Cys Glu Pro Pro Thr  Ala His Thr
    3725                3730             3735

Thr His  Cys Lys Asp Lys Lys  Glu Phe Leu Cys Arg  Asn Gln Arg
    3740                3745             3750

Cys Leu  Ser Ser Ser Leu Arg  Cys Asn Met Phe Asp  Asp Cys Gly
    3755                3760             3765

Asp Gly  Ser Asp Glu Glu Asp  Cys Ser Ile Asp Pro  Lys Leu Thr
    3770                3775             3780

Ser Cys  Ala Thr Asn Ala Ser  Ile Cys Gly Asp Glu  Ala Arg Cys
    3785                3790             3795

Val Arg  Thr Glu Lys Ala Ala  Tyr Cys Ala Cys Arg  Ser Gly Phe
    3800                3805             3810

His Thr  Val Pro Gly Gln Pro  Gly Cys Gln Asp Ile  Asn Glu Cys
    3815                3820             3825

Leu Arg  Phe Gly Thr Cys Ser  Gln Leu Cys Asn Asn  Thr Lys Gly
    3830                3835             3840

Gly His  Leu Cys Ser Cys Ala  Arg Asn Phe Met Lys  Thr His Asn
    3845                3850             3855

Thr Cys  Lys Ala Glu Gly Ser  Glu Tyr Gln Val Leu  Tyr Ile Ala
    3860                3865             3870

Asp Asp  Asn Glu Ile Arg Ser  Leu Phe Pro Gly His  Pro His Ser
    3875                3880             3885
                                    .
```

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

```
Lys Ile His Lys Phe Gly His   Ser Pro Leu Val Asn   Leu Thr Gly
    4115             4120             4125


Gly Leu Ser His Ala Ser Asp   Val Val Leu Tyr His   Gln His Lys
    4130             4135             4140


Gln Pro Glu Val Thr Asn Pro   Cys Asp Arg Lys Lys   Cys Glu Trp
    4145             4150             4155


Leu Cys Leu Leu Ser Pro Ser   Gly Pro Val Cys Thr   Cys Pro Asn
    4160             4165             4170


Gly Lys Arg Leu Asp Asn Gly   Thr Cys Val Pro Val   Pro Ser Pro
    4175             4180             4185


Thr Pro Pro Pro Asp Ala Pro   Arg Pro Gly Thr Cys   Asn Leu Gln
    4190             4195             4200


Cys Phe Asn Gly Gly Ser Cys   Phe Leu Asn Ala Arg   Arg Gln Pro
    4205             4210             4215


Lys Cys Arg Cys Gln Pro Arg   Tyr Thr Gly Asp Lys   Cys Glu Leu
    4220             4225             4230


Asp Gln Cys Trp Glu His Cys   Arg Asn Gly Gly Thr   Cys Ala Ala
    4235             4240             4245


Ser Pro Ser Gly Met Pro Thr   Cys Arg Cys Pro Thr   Gly Phe Thr
    4250             4255             4260


Gly Pro Lys Cys Thr Gln Gln   Val Cys Ala Gly Tyr   Cys Ala Asn
    4265             4270             4275


Asn Ser Thr Cys Thr Val Asn   Gln Gly Asn Gln Pro   Gln Cys Arg
    4280             4285             4290


Cys Leu Pro Gly Phe Leu Gly   Asp Arg Cys Gln Tyr   Arg Gln Cys
    4295             4300             4305


Ser Gly Tyr Cys Glu Asn Phe   Gly Thr Cys Gln Met   Ala Ala Asp
    4310             4315             4320


Gly Ser Arg Gln Cys Arg Cys   Thr Ala Tyr Phe Glu   Gly Ser Arg
    4325             4330             4335
```

```
Cys Glu   Val Asn Lys Cys Ser   Arg Cys Leu Glu Gly   Ala Cys Val
    4340                  4345                4350

Val Asn   Lys Gln Ser Gly Asp   Val Thr Cys Asn Cys   Thr Asp Gly
    4355                  4360                4365

Arg Val   Ala Pro Ser Cys Leu   Thr Cys Val Gly His   Cys Ser Asn
    4370                  4375                4380

Gly Gly   Ser Cys Thr Met Asn   Ser Lys Met Met Pro   Glu Cys Gln
    4385                  4390                4395

Cys Pro   Pro His Met Thr Gly   Pro Arg Cys Glu Glu   His Val Phe
    4400                  4405                4410

Ser Gln   Gln Gln Pro Gly
    4415
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<210>   10
<211>   4464
<212>   PRT
<213>   H. sapiens

<400>   10
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Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1               5               10              15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20              25              30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35              40              45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50              55              60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65              70              75              80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85              90              95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100             105             110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115             120             125
```

```
Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130             135             140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145             150             155             160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165             170             175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180             185             190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195             200             205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210             215             220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu

225                 230             235                 240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280             285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
    355             360             365
```

```
Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
            420             425             430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
            435             440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470             475             480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485             490             495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
            500             505             510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
            515             520             525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530             535             540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545             550             555             560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565             570             575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580             585             590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
    595             600             605
```

```
Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610             615             620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625             630             635             640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
                645             650             655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660             665             670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675             680             685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690             695             700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705             710             715             720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725             730             735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly

        740             745             750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755             760             765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770             775             780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785             790             795             800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805             810             815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820             825             830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
    835             840             845
```

```
Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850             855             860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865             870             875             880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885             890             895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
            900             905             910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915             920             925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930             935             940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945             950             955             960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
            965             970             975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
        980             985             990

Asn Trp Arg Cys Asp Asn Asp Asn  Asp Cys Gly Asp Asn  Ser Asp Glu
    995             1000             1005

Ala Gly  Cys Ser His Ser Cys  Ser Ser Thr Gln Phe  Lys Cys Asn
    1010             1015             1020

Ser Gly  Arg Cys Ile Pro Glu  His Trp Thr Cys Asp  Gly Asp Asn
    1025             1030             1035

Asp Cys  Gly Asp Tyr Ser Asp  Glu Thr His Ala Asn  Cys Thr Asn
    1040             1045             1050

Gln Ala  Thr Arg Pro Pro Gly  Gly Cys His Thr Asp  Glu Phe Gln
    1055             1060             1065

Cys Arg  Leu Asp Gly Leu Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    1070             1075             1080
```

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```
Gly Asp  Thr Asp Cys Met Asp  Ser Ser Asp Glu Lys  Ser Cys Glu
    1085             1090              1095


Gly Val  Thr His Val Cys Asp  Pro Ser Val Lys Phe  Gly Cys Lys
    1100             1105              1110


Asp Ser  Ala Arg Cys Ile Ser  Lys Ala Trp Val Cys  Asp Gly Asp
    1115             1120              1125


Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130             1135              1140


Ala Cys  Arg Pro Pro Ser His  Pro Cys Ala Asn Asn  Thr Ser Val
    1145             1150              1155


Cys Leu  Pro Pro Asp Lys Leu  Cys Asp Gly Asn Asp  Asp Cys Gly
    1160             1165              1170


Asp Gly  Ser Asp Glu Gly Glu  Leu Cys Asp Gln Cys  Ser Leu Asn
    1175             1180              1185


Asn Gly  Gly Cys Ser His Asn  Cys Ser Val Ala Pro  Gly Glu Gly
    1190             1195              1200


Ile Val  Cys Ser Cys Pro Leu  Gly Met Glu Leu Gly  Pro Asp Asn
    1205             1210              1215


His Thr  Cys Gln Ile Gln Ser  Tyr Cys Ala Lys His  Leu Lys Cys
    1220             1225              1230


Ser Gln  Lys Cys Asp Gln Asn  Lys Phe Ser Val Lys  Cys Ser Cys
    1235             1240              1245


Tyr Glu  Gly Trp Val Leu Glu  Pro Asp Gly Glu Ser  Cys Arg Ser
    1250             1255              1260


Leu Asp  Pro Phe Lys Pro Phe  Ile Ile Phe Ser Asn  Arg His Glu
    1265             1270              1275


Ile Arg  Arg Ile Asp Leu His  Lys Gly Asp Tyr Ser  Val Leu Val
    1280             1285              1290


Pro Gly  Leu Arg Asn Thr Ile  Ala Leu Asp Phe His  Leu Ser Gln
    1295             1300              1305
```

```
Ser Ala  Leu Tyr Trp Thr Asp  Val Val Glu Asp Lys  Ile Tyr Arg
    1310              1315              1320

Gly Lys  Leu Leu Asp Asn Gly  Ala Leu Thr Ser Phe  Glu Val Val
    1325              1330              1335

Ile Gln  Tyr Gly Leu Ala Thr  Pro Glu Gly Leu Ala  Val Asp Trp
    1340              1345              1350

Ile Ala  Gly Asn Ile Tyr Trp  Val Glu Ser Asn Leu  Asp Gln Ile
    1355              1360              1365

Glu Val  Ala Lys Leu Asp Gly  Thr Leu Arg Thr Thr  Leu Leu Ala
    1370              1375              1380

Gly Asp  Ile Glu His Pro Arg  Ala Ile Ala Leu Asp  Pro Arg Asp
    1385              1390              1395

Gly Ile  Leu Phe Trp Thr Asp  Trp Asp Ala Ser Leu  Pro Arg Ile
    1400              1405              1410

Glu Ala  Ala Ser Met Ser Gly  Ala Gly Arg Arg Thr  Val His Arg
    1415              1420  ·           1425

Glu Thr  Gly Ser Gly Gly Trp  Pro Asn Gly Leu Thr  Val Asp Tyr
    1430              1435              1440

Leu Glu  Lys Arg Ile Leu Trp  Ile Asp Ala Arg Ser  Asp Ala Ile
    1445              1450              1455

Tyr Ser  Ala Arg Tyr Asp Gly  Ser Gly His Met Glu  Val Leu Arg
    1460              1465              1470

Gly His  Glu Phe Leu Ser His  Pro Phe Ala Val Thr  Leu Tyr Gly
    1475              1480              1485

Gly Glu  Val Tyr Trp Thr Asp  Trp Arg Thr Asn Thr  Leu Ala Lys
    1490              1495              1500

Ala Asn  Lys Trp Thr Gly His  Asn Val Thr Val Val  Gln Arg Thr
    1505              1510              1515

Asn Thr  Gln Pro Phe Asp Leu  Gln Val Tyr His Pro  Ser Arg Gln
    1520              1525              1530
```

```
Pro Met   Ala Pro Asn Pro Cys   Glu Ala Asn Gly Gly   Gln Gly Pro
    1535                1540                1545

Cys Ser   His Leu Cys Leu Ile   Asn Tyr Asn Arg Thr   Val Ser Cys
    1550                1555                1560

Ala Cys   Pro His Leu Met Lys   Leu His Lys Asp Asn   Thr Thr Cys
    1565                1570                1575

Tyr Glu   Phe Lys Lys Phe Leu   Leu Tyr Ala Arg Gln   Met Glu Ile
    1580                1585                1590

Arg Gly   Val Asp Leu Asp Ala   Pro Tyr Tyr Asn Tyr   Ile Ile Ser
    1595                1600                1605

Phe Thr   Val Pro Asp Ile Asp   Asn Val Thr Val Leu   Asp Tyr Asp
    1610                1615                1620

Ala Arg   Glu Gln Arg Val Tyr   Trp Ser Asp Val Arg   Thr Gln Ala
    1625                1630                1635

Ile Lys   Arg Ala Phe Ile Asn   Gly Thr Gly Val Glu   Thr Val Val
    1640                1645                1650

Ser Ala   Asp Leu Pro Asn Ala   His Gly Leu Ala Val   Asp Trp Val
    1655                1660                1665

Ser Arg   Asn Leu Phe Trp Thr   Ser Tyr Asp Thr Asn   Lys Lys Gln
    1670                1675                1680

Ile Asn   Val Ala Arg Leu Asp   Gly Ser Phe Lys Asn   Ala Val Val
    1685                1690                1695

Gln Gly   Leu Glu Gln Pro His   Gly Leu Val Val His   Pro Leu Arg
    1700                1705                1710

Gly Lys   Leu Tyr Trp Thr Asp   Gly Asp Asn Ile Ser   Met Ala Asn
    1715                1720                1725

Met Asp   Gly Ser Asn Arg Thr   Leu Leu Phe Ser Gly   Gln Lys Gly
    1730                1735                1740

Pro Val   Gly Leu Ala Ile Asp   Phe Pro Glu Ser Lys   Leu Tyr Trp
    1745                1750                1755
```

Ile Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly
    1760   1765   1770

Ser Gly Leu Glu Val Ile Asp Ala Met Arg Ser Gln Leu Gly Lys
    1775   1780   1785

Ala Thr Ala Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp
    1790   1795   1800

Gln Val Ser Glu Lys Met Gly Thr Cys Ser Lys Ala Asp Gly Ser
    1805   1810   1815

Gly Ser Val Val Leu Arg Asn Ser Thr Thr Leu Val Met His Met
    1820   1825   1830

Lys Val Tyr Asp Glu Ser Ile Gln Leu Asp His Lys Gly Thr Asn
    1835   1840   1845

Pro Cys Ser Val Asn Asn Gly Asp Cys Ser Gln Leu Cys Leu Pro
    1850   1855   1860

Thr Ser Glu Thr Thr Arg Ser Cys Met Cys Thr Ala Gly Tyr Ser
    1865   1870   1875

Leu Arg Ser Gly Gln Gln Ala Cys Glu Gly Val Gly Ser Phe Leu
    1880   1885   1890

Leu Tyr Ser Val His Glu Gly Ile Arg Gly Ile Pro Leu Asp Pro
    1895   1900   1905

Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser Gly Thr Ser Leu
    1910   1915   1920

Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr Ile Tyr Trp
    1925   1930   1935

Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg Asp Gln
    1940   1945   1950

Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val Glu
    1955   1960   1965

Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
    1970   1975   1980

Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe
    1985   1990   1995

Arg Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile
    2000   2005   2010

Thr Val His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly
    2015   2020   2025

Gln Tyr Pro Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg
    2030   2035   2040

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

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Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

Asn Asp Asp Gly Ser Arg Arg Ile Thr Ile Val Glu Asn Val Gly
    2270   2275   2280

Ser Val Glu Gly Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr
    2285   2290   2295

Trp Thr Ser Tyr Thr Thr Ser Thr Ile Thr Arg His Thr Val Asp
    2300   2305   2310

Gln Thr Arg Pro Gly Ala Phe Glu Arg Glu Thr Val Ile Thr Met
    2315   2320   2325

Ser Gly Asp Asp His Pro Arg Ala Phe Val Leu Asp Glu Cys Gln
    2330   2335   2340

Asn Leu Met Phe Trp Thr Asn Trp Asn Glu Gln His Pro Ser Ile
    2345   2350   2355

Met Arg Ala Ala Leu Ser Gly Ala Asn Val Leu Thr Leu Ile Glu
    2360   2365   2370

Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala Ile Asp His Arg Ala
    2375   2380   2385

Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp Lys Ile Glu Arg
    2390   2395   2400

Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu Lys Ser Glu
    2405   2410   2415

Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His Ile Phe
    2420   2425   2430

Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys His
    2435   2440   2445

Val Gly Ser Asn Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
    2450   2455   2460

Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu
    2465   2470   2475

Leu Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys
    2480   2485   2490

Leu Leu Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly
    2495   2500   2505

Arg Ile Leu Gln Asp Asp Leu Thr Cys Arg Ala Val Asn Ser Ser
    2510   2515   2520

Cys Arg Ala Gln Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile
    2525   2530   2535

Asn Phe Ser Leu Thr Cys Asp Gly Val Pro His Cys Lys Asp Lys
    2540   2545   2550

Ser Asp Glu Lys Pro Ser Tyr Cys Asn Ser Arg Arg Cys Lys Lys
    2555   2560   2565

Thr Phe Arg Gln Cys Ser Asn Gly Arg Cys Val Ser Asn Met Leu
    2570   2575   2580

Trp Cys Asn Gly Ala Asp Asp Cys Gly Asp Gly Ser Asp Glu Ile
    2585   2590   2595

Pro Cys Asn Lys Thr Ala Cys Gly Val Gly Glu Phe Arg Cys Arg
    2600   2605   2610

Asp Gly Thr Cys Ile Gly Asn Ser Ser Arg Cys Asn Gln Phe Val
    2615   2620   2625

Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys Ser Ala Thr Asp
    2630   2635   2640

Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val Leu Phe Gln
    2645   2650   2655

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Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp Val Cys
    2660   2665   2670

Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp Cys
    2675   2680   2685

Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
    2690   2695   2700

Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu
    2705   2710   2715

Asp Asp Cys Glu His Gly Glu Asp Glu Thr His Cys Asn Lys Phe
    2720   2725   2730

Cys Ser Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser
    2735   2740   2745

Lys Gln Trp Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser
    2750   2755   2760

Asp Glu Ala Ala His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser
    2765   2770   2775

Phe Ser Cys Pro Gly Thr His Val Cys Val Pro Glu Arg Trp Leu
    2780   2785   2790

Cys Asp Gly Asp Lys Asp Cys Ala Asp Gly Ala Asp Glu Ser Ile
    2795   2800   2805

Ala Ala Gly Cys Leu Tyr Asn Ser Thr Cys Asp Asp Arg Glu Phe
    2810   2815   2820

Met Cys Gln Asn Arg Gln Cys Ile Pro Lys His Phe Val Cys Asp
    2825   2830   2835

His Asp Arg Asp Cys Ala Asp Gly Ser Asp Glu Ser Pro Glu Cys
    2840   2845   2850

Glu Tyr Pro Thr Cys Gly Pro Ser Glu Phe Arg Cys Ala Asn Gly
    2855   2860   2865

Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp Gly Glu Asn Asp
    2870   2875   2880

Cys His Asp Gln Ser Asp Glu Ala Pro Lys Asn Pro His Cys Thr
    2885   2890   2895

Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu Cys Ser
    2900   2905   2910

Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln Asp
    2915   2920   2925

Asp Cys Gly Asp Ser Ser Asp Glu Arg Gly Cys His Ile Asn Glu
    2930   2935   2940

Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp
    2945   2950   2955

Leu Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu
    2960   2965   2970

Lys Asp Asp Gly Arg Thr Cys Ala Asp Val Asp Glu Cys Ser Thr
    2975   2980   2985

Thr Phe Pro Cys Ser Gln Arg Cys Ile Asn Thr His Gly Ser Tyr
    2990   2995   3000

Lys Cys Leu Cys Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro
    3005   3010   3015

His Ser Cys Lys Ala Val Thr Asp Glu Glu Pro Phe Leu Ile Phe
    3020   3025   3030

Ala Asn Arg Tyr Tyr Leu Arg Lys Leu Asn Leu Asp Gly Ser Asn
    3035   3040   3045

Tyr Thr Leu Leu Lys Gln Gly Leu Asn Asn Ala Val Ala Leu Asp
    3050   3055   3060

Phe Asp Tyr Arg Glu Gln Met Ile Tyr Trp Thr Asp Val Thr Thr
    3065   3070   3075

Gln Gly Ser Met Ile Arg Arg Met His Leu Asn Gly Ser Asn Val
    3080   3085   3090

Gln Val Leu His Arg Thr Gly Leu Ser Asn Pro Asp Gly Leu Ala
    3095   3100   3105

```
Val Asp  Trp Val Gly Gly Asn  Leu Tyr Trp Cys Asp  Lys Gly Arg
    3110             3115             3120
```

```
Asp Thr  Ile Glu Val Ser Lys  Leu Asn Gly Ala Tyr  Arg Thr Val
    3125             3130             3135
```

```
Leu Val  Ser Ser Gly Leu Arg  Glu Pro Arg Ala Leu  Val Val Asp
    3140             3145             3150
```

```
Val Gln  Asn Gly Tyr Leu Tyr  Trp Thr Asp Trp Gly  Asp His Ser
    3155             3160             3165
```

```
Leu Ile  Gly Arg Ile Gly Met  Asp Gly Ser Ser Arg  Ser Val Ile
    3170             3175             3180
```

```
Val Asp  Thr Lys Ile Thr Trp  Pro Asn Gly Leu Thr  Leu Asp Tyr
    3185             3190             3195
```

```
Val Thr  Glu Arg Ile Tyr Trp  Ala Asp Ala Arg Glu  Asp Tyr Ile
    3200             3205             3210
```

```
Glu Phe  Ala Ser Leu Asp Gly  Ser Asn Arg His Val  Val Leu Ser
    3215             3220             3225
```

```
Gln Asp  Ile Pro His Ile Phe  Ala Leu Thr Leu Phe  Glu Asp Tyr
    3230             3235             3240
```

```
Val Tyr  Trp Thr Asp Trp Glu  Thr Lys Ser Ile Asn  Arg Ala His
    3245             3250             3255
```

```
Lys Thr  Thr Gly Thr Asn Lys  Thr Leu Leu Ile Ser  Thr Leu His
    3260             3265             3270
```

```
Arg Pro  Met Asp Leu His Val  Phe His Ala Leu Arg  Gln Pro Asp
    3275             3280             3285
```

```
Val Pro  Asn His Pro Cys Lys  Val Asn Asn Gly Gly  Cys Ser Asn
    3290             3295             3300
```

```
Leu Cys  Leu Leu Ser Pro Gly  Gly Gly His Lys Cys  Ala Cys Pro
    3305             3310             3315
```

```
Thr Asn  Phe Tyr Leu Gly Ser  Asp Gly Arg Thr Cys  Val Ser Asn
    3320             3325             3330
```

```
Cys Thr  Ala Ser Gln Phe Val  Cys Lys Asn Asp Lys  Cys Ile Pro
    3335             3340             3345

Phe Trp  Trp Lys Cys Asp Thr  Glu Asp Asp Cys Gly  Asp His Ser
    3350             3355             3360

Asp Glu  Pro Pro Asp Cys Pro  Glu Phe Lys Cys Arg  Pro Gly Gln
    3365             3370             3375

Phe Gln  Cys Ser Thr Gly Ile  Cys Thr Asn Pro Ala  Phe Ile Cys
    3380             3385             3390

Asp Gly  Asp Asn Asp Cys Gln  Asp Asn Ser Asp Glu  Ala Asn Cys
    3395             3400             3405

Asp Ile  His Val Cys Leu Pro  Ser Gln Phe Lys Cys  Thr Asn Thr
    3410             3415             3420

Asn Arg  Cys Ile Pro Gly Ile  Phe Arg Cys Asn Gly  Gln Asp Asn
    3425             3430             3435

Cys Gly  Asp Gly Glu Asp Glu  Arg Asp Cys Pro Glu  Val Thr Cys
    3440             3445             3450

Ala Pro  Asn Gln Phe Gln Cys  Ser Ile Thr Lys Arg  Cys Ile Pro
    3455             3460             3465

Arg Val  Trp Val Cys Asp Arg  Asp Asn Asp Cys Val  Asp Gly Ser
    3470             3475             3480

Asp Glu  Pro Ala Asn Cys Thr  Gln Met Thr Cys Gly  Val Asp Glu
    3485             3490             3495

Phe Arg  Cys Lys Asp Ser Gly  Arg Cys Ile Pro Ala  Arg Trp Lys
    3500             3505             3510

Cys Asp  Gly Glu Asp Asp Cys  Gly Asp Gly Ser Asp  Glu Pro Lys
    3515             3520             3525

Glu Glu  Cys Asp Glu Arg Thr  Cys Glu Pro Tyr Gln  Phe Arg Cys
    3530             3535             3540

Lys Asn  Asn Arg Cys Val Pro  Gly Arg Trp Gln Cys  Asp Tyr Asp
    3545             3550             3555
```

```
Asn Asp  Cys Gly Asp Asn Ser  Asp Glu Glu Ser Cys  Thr Pro Arg
    3560                 3565              3570

Pro Cys  Ser Glu Ser Glu Phe  Ser Cys Ala Asn Gly  Arg Cys Ile
    3575                 3580              3585

Ala Gly  Arg Trp Lys Cys Asp  Gly Asp His Asp Cys  Ala Asp Gly
    3590                 3595              3600

Ser Asp  Glu Lys Asp Cys Thr  Pro Arg Cys Asp Met  Asp Gln Phe
    3605                 3610              3615

Gln Cys  Lys Ser Gly His Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    3620                 3625              3630

Ala Asp  Ala Asp Cys Met Asp  Gly Ser Asp Glu Glu  Ala Cys Gly
    3635                 3640              3645

Thr Gly  Val Arg Thr Cys Pro  Leu Asp Glu Phe Gln  Cys Asn Asn
    3650                 3655              3660

Thr Leu  Cys Lys Pro Leu Ala  Trp Lys Cys Asp Gly  Glu Asp Asp
    3665                 3670              3675

Cys Gly  Asp Asn Ser Asp Glu  Asn Pro Glu Glu Cys  Ala Arg Phe
    3680                 3685              3690

Val Cys  Pro Pro Asn Arg Pro  Phe Arg Cys Lys Asn  Asp Arg Val
    3695                 3700              3705

Cys Leu  Trp Ile Gly Arg Gln  Cys Asp Gly Thr Asp  Asn Cys Gly
    3710                 3715              3720

Asp Gly  Thr Asp Glu Glu Asp  Cys Glu Pro Pro Thr  Ala His Thr
    3725                 3730              3735

Thr His  Cys Lys Asp Lys Lys  Glu Phe Leu Cys Arg  Asn Gln Arg
    3740                 3745              3750

Cys Leu  Ser Ser Ser Leu Arg  Cys Asn Met Phe Asp  Asp Cys Gly
    3755                 3760              3765

Asp Gly  Ser Asp Glu Glu Asp  Cys Ser Ile Asp Pro  Lys Leu Thr
    3770                 3775              3780
```

```
Ser Cys   Ala Thr Asn Ala Ser   Ile Cys Gly Asp Glu   Ala Arg Cys
    3785                  3790                  3795

Val Arg   Thr Glu Lys Ala Ala   Tyr Cys Ala Cys Arg   Ser Gly Phe
    3800                  3805                  3810

His Thr   Val Pro Gly Gln Pro   Gly Cys Gln Asp Ile   Asn Glu Cys
    3815                  3820                  3825

Leu Arg   Phe Gly Thr Cys Ser   Gln Leu Cys Asn Asn   Thr Lys Gly
    3830                  3835                  3840

Gly His   Leu Cys Ser Cys Ala   Arg Asn Phe Met Lys   Thr His Asn
    3845                  3850                  3855

Thr Cys   Lys Ala Glu Gly Ser   Glu Tyr Gln Val Leu   Tyr Ile Ala
    3860                  3865                  3870

Asp Asp   Asn Glu Ile Arg Ser   Leu Phe Pro Gly His   Pro His Ser
    3875                  3880                  3885

Ala Tyr   Glu Gln Ala Phe Gln   Gly Asp Glu Ser Val   Arg Ile Asp
    3890                  3895                  3900

Ala Met   Asp Val His Val Lys   Ala Gly Arg Val Tyr   Trp Thr Asn
    3905                  3910                  3915

Trp His   Thr Gly Thr Ile Ser   Tyr Arg Ser Leu Pro   Pro Ala Ala
    3920                  3925                  3930

Pro Pro   Thr Thr Ser Asn Arg   His Arg Arg Gln Ile   Asp Arg Gly
    3935                  3940                  3945

Val Thr   His Leu Asn Ile Ser   Gly Leu Lys Met Pro   Arg Gly Ile
    3950                  3955                  3960

Ala Ile   Asp Trp Val Ala Gly   Asn Val Tyr Trp Thr   Asp Ser Gly
    3965                  3970                  3975

Arg Asp   Val Ile Glu Val Ala   Gln Met Lys Gly Glu   Asn Arg Lys
    3980                  3985                  3990

Thr Leu   Ile Ser Gly Met Ile   Asp Glu Pro His Ala   Ile Val Val
    3995                  4000                  4005
```

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
    4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

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Asp Gln  Cys Trp Glu His Cys  Arg Asn Gly Gly Thr  Cys Ala Ala
    4235                 4240               4245

Ser Pro  Ser Gly Met Pro Thr  Cys Arg Cys Pro Thr  Gly Phe Thr
    4250                 4255               4260

Gly Pro  Lys Cys Thr Gln Gln  Val Cys Ala Gly Tyr  Cys Ala Asn
    4265                 4270               4275

Asn Ser  Thr Cys Thr Val Asn  Gln Gly Asn Gln Pro  Gln Cys Arg
    4280                 4285               4290

Cys Leu  Pro Gly Phe Leu Gly  Asp Arg Cys Gln Tyr  Arg Gln Cys
    4295                 4300               4305

Ser Gly  Tyr Cys Glu Asn Phe  Gly Thr Cys Gln Met  Ala Ala Asp
    4310                 4315               4320

Gly Ser  Arg Gln Cys Arg Cys  Thr Ala Tyr Phe Glu  Gly Ser Arg
    4325                 4330               4335

Cys Glu  Val Asn Lys Cys Ser  Arg Cys Leu Glu Gly  Ala Cys Val
    4340                 4345               4350

Val Asn  Lys Gln Ser Gly Asp  Val Thr Cys Asn Cys  Thr Asp Gly
    4355                 4360               4365

Arg Val  Ala Pro Ser Cys Leu  Thr Cys Val Gly His  Cys Ser Asn
    4370                 4375               4380

Gly Gly  Ser Cys Thr Met Asn  Ser Lys Met Met Pro  Glu Cys Gln
    4385                 4390               4395

Cys Pro  Pro His Met Thr Gly  Pro Arg Cys Glu Glu  His Val Phe
    4400                 4405               4410

Ser Gln  Gln Gln Pro Gly Gly  Gly Arg Leu Val Pro  Arg Gly Ser
    4415                 4420               4425

Tyr Pro  Tyr Asp Val Pro Asp  Tyr Ala Ile Glu Gly  His Val Gly
    4430                 4435               4440

Leu Asn  Asp Ile Phe Glu Ala  Gln Lys Ile Glu Trp  His Glu Gly
    4445                 4450               4455
```

His His His His His His
    4460

<210>   11
<211>   4419
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<213>   H. sapiens

<400>   11

Met Leu Thr Pro Pro Leu Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp

        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
        115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

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Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195             200             205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210             215             220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275             280             285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395             400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
        420             425             430
```

```
Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435             440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470             475             480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485             490             495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
        500             505             510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515             520             525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530             535             540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn

545                 550                 555                 560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565             570             575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
        580             585             590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
        595             600             605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610             615             620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625             630             635             640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645             650             655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
        660             665             670
```

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Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675             680             685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690             695             700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705             710             715             720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725             730             735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
        740             745             750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
        755             760             765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770             775             780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785             790             795             800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805             810             815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820             825             830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835             840             845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850             855             860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865             870             875             880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
            885             890             895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
        900             905             910
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Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
        915                 920                 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
        930                 935                 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945                 950                 955                 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965                 970                 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile
            980                 985                 990

Asn Trp Arg Cys Asp Asn Asp Asn  Asp Cys Gly Asp Asn  Ser Asp Glu
        995                 1000                1005

Ala Gly  Cys Ser His Ser Cys  Ser Ser Thr Gln Phe  Lys Cys Asn
    1010            1015                1020

Ser Gly  Arg Cys Ile Pro Glu  His Trp Thr Cys Asp  Gly Asp Asn
    1025            1030                1035

Asp Cys  Gly Asp Tyr Ser Asp  Glu Thr His Ala Asn  Cys Thr Asn
    1040            1045                1050

Gln Ala  Thr Arg Pro Pro Gly  Gly Cys His Thr Asp  Glu Phe Gln
    1055            1060                1065

Cys Arg  Leu Asp Gly Leu Cys  Ile Pro Leu Arg Trp  Arg Cys Asp
    1070            1075                1080

Gly Asp  Thr Asp Cys Met Asp  Ser Ser Asp Glu Lys  Ser Cys Glu
    1085            1090                1095

Gly Val  Thr His Val Cys Asp  Pro Ser Val Lys Phe  Gly Cys Lys
    1100            1105                1110

Asp Ser  Ala Arg Cys Ile Ser  Lys Ala Trp Val Cys  Asp Gly Asp
    1115            1120                1125

Asn Asp  Cys Glu Asp Asn Ser  Asp Glu Glu Asn Cys  Glu Ser Leu
    1130            1135                1140
```

Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val
    1145   1150   1155

Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
    1160   1165   1170

Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp Gln Cys Ser Leu Asn
    1175   1180   1185

Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala Pro Gly Glu Gly
    1190   1195   1200

Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly Pro Asp Asn
    1205   .   1210   1215

His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu Lys Cys
    1220   1225   1230

Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser Cys
    1235   1240   1245

Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Ser Cys Arg Ser
    1250   1255   1260

Leu Asp Pro Phe Lys Pro Phe Ile Ile Phe Ser Asn Arg His Glu
    1265   1270   1275

Ile Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val
    1280   1285   1290

Pro Gly Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln
    1295   1300   1305

Ser Ala Leu Tyr Trp Thr Asp Val Val Glu Asp Lys Ile Tyr Arg
    1310   1315   1320

Gly Lys Leu Leu Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val
    1325   1330   1335

Ile Gln Tyr Gly Leu Ala Thr Pro Glu Gly Leu Ala Val Asp Trp
    1340   1345   1350

Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser Asn Leu Asp Gln Ile
    1355   1360   1365

Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr Thr Leu Leu Ala
    1370   1375   1380

Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp Pro Arg Asp
    1385   1390   1395

Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro Arg Ile
    1400   1405   1410

Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr Val His Arg
    1415   1420   1425

Glu Thr Gly Ser Gly Gly Trp Pro Asn Gly Leu Thr Val Asp Tyr
    1430   1435   1440

Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser Asp Ala Ile
    1445   1450   1455

Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val Leu Arg
    1460   1465   1470

Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr Gly
    1475   1480   1485

Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
    1490   1495   1500

Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr
    1505   1510   1515

Asn Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln
    1520   1525   1530

Pro Met Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Gln Gly Pro
    1535   1540   1545

Cys Ser His Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Cys
    1550   1555   1560

Ala Cys Pro His Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys
    1565   1570   1575

Tyr Glu Phe Lys Lys Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile
    1580   1585   1590

```
Arg Gly  Val Asp Leu Asp Ala  Pro Tyr Tyr Asn Tyr  Ile Ile Ser
    1595                 1600              1605

Phe Thr  Val Pro Asp Ile Asp  Asn Val Thr Val Leu  Asp Tyr Asp
    1610                 1615              1620

Ala Arg  Glu Gln Arg Val Tyr  Trp Ser Asp Val Arg  Thr Gln Ala
    1625                 1630              1635

Ile Lys  Arg Ala Phe Ile Asn  Gly Thr Gly Val Glu  Thr Val Val
    1640                 1645              1650

Ser Ala  Asp Leu Pro Asn Ala  His Gly Leu Ala Val  Asp Trp Val
    1655                 1660              1665

Ser Arg  Asn Leu Phe Trp Thr  Ser Tyr Asp Thr Asn  Lys Lys Gln
    1670                 1675              1680

Ile Asn  Val Ala Arg Leu Asp  Gly Ser Phe Lys Asn  Ala Val Val
    1685                 1690              1695

Gln Gly  Leu Glu Gln Pro His  Gly Leu Val Val His  Pro Leu Arg
    1700                 1705              1710

Gly Lys  Leu Tyr Trp Thr Asp  Gly Asp Asn Ile Ser  Met Ala Asn
    1715                 1720              1725

Met Asp  Gly Ser Asn Arg Thr  Leu Leu Phe Ser Gly  Gln Lys Gly
    1730                 1735              1740

Pro Val  Gly Leu Ala Ile Asp  Phe Pro Glu Ser Lys  Leu Tyr Trp
    1745                 1750              1755

Ile Ser  Ser Gly Asn His Thr  Ile Asn Arg Cys Asn  Leu Asp Gly
    1760                 1765              1770

Ser Gly  Leu Glu Val Ile Asp  Ala Met Arg Ser Gln  Leu Gly Lys
    1775                 1780              1785

Ala Thr  Ala Leu Ala Ile Met  Gly Asp Lys Leu Trp  Trp Ala Asp
    1790                 1795              1800

Gln Val  Ser Glu Lys Met Gly  Thr Cys Ser Lys Ala  Asp Gly Ser
    1805                 1810              1815
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Gly Ser  Val Val Leu Arg Asn  Ser Thr Thr Leu Val  Met His Met
    1820                 1825              1830

Lys Val  Tyr Asp Glu Ser Ile  Gln Leu Asp His Lys  Gly Thr Asn
    1835                 1840              1845

Pro Cys  Ser Val Asn Asn Gly  Asp Cys Ser Gln Leu  Cys Leu Pro
    1850                 1855              1860


Thr Ser  Glu Thr Thr Arg Ser  Cys Met Cys Thr Ala  Gly Tyr Ser
    1865                 1870              1875

Leu Arg  Ser Gly Gln Gln Ala  Cys Glu Gly Val Gly  Ser Phe Leu
    1880                 1885              1890

Leu Tyr  Ser Val His Glu Gly  Ile Arg Gly Ile Pro  Leu Asp Pro
    1895                 1900              1905

Asn Asp  Lys Ser Asp Ala Leu  Val Pro Val Ser Gly  Thr Ser Leu
    1910                 1915              1920

Ala Val  Gly Ile Asp Phe His  Ala Glu Asn Asp Thr  Ile Tyr Trp
    1925                 1930              1935

Val Asp  Met Gly Leu Ser Thr  Ile Ser Arg Ala Lys  Arg Asp Gln
    1940                 1945              1950

Thr Trp  Arg Glu Asp Val Val  Thr Asn Gly Ile Gly  Arg Val Glu
    1955                 1960              1965

Gly Ile  Ala Val Asp Trp Ile  Ala Gly Asn Ile Tyr  Trp Thr Asp
    1970                 1975              1980

Gln Gly  Phe Asp Val Ile Glu  Val Ala Arg Leu Asn  Gly Ser Phe
    1985                 1990              1995

Arg Tyr  Val Val Ile Ser Gln  Gly Leu Asp Lys Pro  Arg Ala Ile
    2000                 2005              2010

Thr Val  His Pro Glu Lys Gly  Tyr Leu Phe Trp Thr  Glu Trp Gly
    2015                 2020              2025

Gln Tyr  Pro Arg Ile Glu Arg  Ser Arg Leu Asp Gly  Thr Glu Arg
    2030                 2035              2040
```

Val Val Leu Val Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser
    2045   2050   2055

Val Asp Tyr Gln Asp Gly Lys Leu Tyr Trp Cys Asp Ala Arg Thr
    2060   2065   2070

Asp Lys Ile Glu Arg Ile Asp Leu Glu Thr Gly Glu Asn Arg Glu
    2075   2080   2085

Val Val Leu Ser Ser Asn Asn Met Asp Met Phe Ser Val Ser Val
    2090   2095   2100

Phe Glu Asp Phe Ile Tyr Trp Ser Asp Arg Thr His Ala Asn Gly
    2105   2110   2115

Ser Ile Lys Arg Gly Ser Lys Asp Asn Ala Thr Asp Ser Val Pro
    2120   2125   2130

Leu Arg Thr Gly Ile Gly Val Gln Leu Lys Asp Ile Lys Val Phe
    2135   2140   2145

Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys Ala Val Ala Asn
    2150   2155   2160

Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Arg Gly Gln Arg
    2165   2170   2175

Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly Ala Ser
    2180   2185   2190

Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr Ile
    2195   2200   2205

Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
    2210   2215   2220

Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala
    2225   2230   2235

Leu Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn
    2240   2245   2250

Arg Ile Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile
    2255   2260   2265

```
Asn Asp  Asp Gly Ser Arg Arg  Ile Thr Ile Val Glu  Asn Val Gly
    2270                 2275              2280

Ser Val  Glu Gly Leu Ala Tyr  His Arg Gly Trp Asp  Thr Leu Tyr
    2285                 2290              2295

Trp Thr  Ser Tyr Thr Thr Ser  Thr Ile Thr Arg His  Thr Val Asp
    2300                 2305              2310

Gln Thr  Arg Pro Gly Ala Phe  Glu Arg Glu Thr Val  Ile Thr Met
    2315                 2320              2325

Ser Gly  Asp Asp His Pro Arg  Ala Phe Val Leu Asp  Glu Cys Gln
    2330                 2335              2340

Asn Leu  Met Phe Trp Thr Asn  Trp Asn Glu Gln His  Pro Ser Ile
    2345                 2350              2355

Met Arg  Ala Ala Leu Ser Gly  Ala Asn Val Leu Thr  Leu Ile Glu
    2360                 2365              2370

Lys Asp  Ile Arg Thr Pro Asn  Gly Leu Ala Ile Asp  His Arg Ala
    2375                 2380              2385

Glu Lys  Leu Tyr Phe Ser Asp  Ala Thr Leu Asp Lys  Ile Glu Arg
    2390                 2395              2400

Cys Glu  Tyr Asp Gly Ser His  Arg Tyr Val Ile Leu  Lys Ser Glu
    2405                 2410              2415

Pro Val  His Pro Phe Gly Leu  Ala Val Tyr Gly Glu  His Ile Phe
    2420                 2425              2430

Trp Thr  Asp Trp Val Arg Arg  Ala Val Gln Arg Ala  Asn Lys His
    2435                 2440              2445

Val Gly  Ser Asn Met Lys Leu  Leu Arg Val Asp Ile  Pro Gln Gln
    2450                 2455              2460

Pro Met  Gly Ile Ile Ala Val  Ala Asn Asp Thr Asn  Ser Cys Glu
    2465                 2470              2475

Leu Ser  Pro Cys Arg Ile Asn  Asn Gly Gly Cys Gln  Asp Leu Cys
    2480                 2485              2490
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Leu Leu   Thr His Gln Gly His   Val Asn Cys Ser Cys   Arg Gly Gly
    2495              2500                2505


Arg Ile   Leu Gln Asp Asp Leu   Thr Cys Arg Ala Val   Asn Ser Ser
    2510              2515                2520


Cys Arg   Ala Gln Asp Glu Phe   Glu Cys Ala Asn Gly   Glu Cys Ile
    2525              2530                2535


Asn Phe   Ser Leu Thr Cys Asp   Gly Val Pro His Cys   Lys Asp Lys
    2540              2545                2550


Ser Asp   Glu Lys Pro Ser Tyr   Cys Asn Ser Arg Arg   Cys Lys Lys
    2555              2560                2565


Thr Phe   Arg Gln Cys Ser Asn   Gly Arg Cys Val Ser   Asn Met Leu
    2570              2575                2580


Trp Cys   Asn Gly Ala Asp Asp   Cys Gly Asp Gly Ser   Asp Glu Ile
    2585              2590                2595


Pro Cys   Asn Lys Thr Ala Cys   Gly Val Gly Glu Phe   Arg Cys Arg
    2600              2605                2610


Asp Gly   Thr Cys Ile Gly Asn   Ser Ser Arg Cys Asn   Gln Phe Val
    2615              2620                2625


Asp Cys   Glu Asp Ala Ser Asp   Glu Met Asn Cys Ser   Ala Thr Asp
    2630              2635                2640


Cys Ser   Ser Tyr Phe Arg Leu   Gly Val Lys Gly Val   Leu Phe Gln
    2645              2650                2655


Pro Cys   Glu Arg Thr Ser Leu   Cys Tyr Ala Pro Ser   Trp Val Cys
    2660              2665                2670


Asp Gly   Ala Asn Asp Cys Gly   Asp Tyr Ser Asp Glu   Arg Asp Cys
    2675              2680                2685


Pro Gly   Val Lys Arg Pro Arg   Cys Pro Leu Asn Tyr   Phe Ala Cys
    2690              2695                2700


Pro Ser   Gly Arg Cys Ile Pro   Met Ser Trp Thr Cys   Asp Lys Glu
    2705              2710                2715
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Asp Asp  Cys Glu His Gly Glu  Asp Glu Thr His Cys  Asn Lys Phe
    2720                 2725             2730

Cys Ser  Glu Ala Gln Phe Glu  Cys Gln Asn His Arg  Cys Ile Ser
    2735                 2740             2745

Lys Gln  Trp Leu Cys Asp Gly  Ser Asp Asp Cys Gly  Asp Gly Ser
    2750                 2755             2760

Asp Glu  Ala Ala His Cys Glu  Gly Lys Thr Cys Gly  Pro Ser Ser
    2765                 2770             2775

Phe Ser  Cys Pro Gly Thr His  Val Cys Val Pro Glu  Arg Trp Leu
    2780                 2785             2790

Cys Asp  Gly Asp Lys Asp Cys  Ala Asp Gly Ala Asp  Glu Ser Ile
    2795                 2800             2805

Ala Ala  Gly Cys Leu Tyr Asn  Ser Thr Cys Asp Asp  Arg Glu Phe
    2810                 ' 2815            2820

Met Cys  Gln Asn Arg Gln Cys  Ile Pro Lys His Phe  Val Cys Asp
    2825                 2830             2835

His Asp  Arg Asp Cys Ala Asp  Gly Ser Asp Glu Ser  Pro Glu Cys
    2840                 2845             2850

Glu Tyr  Pro Thr Cys Gly Pro  Ser Glu Phe Arg Cys  Ala Asn Gly
    2855                 2860             2865

Arg Cys  Leu Ser Ser Arg Gln  Trp Glu Cys Asp Gly  Glu Asn Asp
    2870                 2875             2880

Cys His  Asp Gln Ser Asp Glu  Ala Pro Lys Asn Pro  His Cys Thr
    2885                 2890             2895

Ser Pro  Glu His Lys Cys Asn  Ala Ser Ser Gln Phe  Leu Cys Ser
    2900                 2905             2910

Ser Gly  Arg Cys Val Ala Glu  Ala Leu Leu Cys Asn  Gly Gln Asp
    2915                 2920             2925

Asp Cys  Gly Asp Ser Ser Asp  Glu Arg Gly Cys His  Ile Asn Glu
    2930                 2935             2940
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Cys Leu  Ser Arg Lys Leu Ser  Gly Cys Ser Gln Asp  Cys Glu Asp
    2945             2950             2955

Leu Lys  Ile Gly Phe Lys Cys  Arg Cys Arg Pro Gly  Phe Arg Leu
    2960             2965             2970

Lys Asp  Asp Gly Arg Thr Cys  Ala Asp Val Asp Glu  Cys Ser Thr
    2975             2980             2985

Thr Phe  Pro Cys Ser Gln Arg  Cys Ile Asn Thr His  Gly Ser Tyr
    2990             2995             3000

Lys Cys  Leu Cys Val Glu Gly  Tyr Ala Pro Arg Gly  Gly Asp Pro
    3005             3010             3015

His Ser  Cys Lys Ala Val Thr  Asp Glu Glu Pro Phe  Leu Ile Phe
    3020             3025             3030

Ala Asn  Arg Tyr Tyr Leu Arg  Lys Leu Asn Leu Asp  Gly Ser Asn
    3035             3040             3045

Tyr Thr  Leu Leu Lys Gln Gly  Leu Asn Asn Ala Val  Ala Leu Asp
    3050             3055             3060

Phe Asp  Tyr Arg Glu Gln Met  Ile Tyr Trp Thr Asp  Val Thr Thr
    3065             3070             3075

Gln Gly  Ser Met Ile Arg Arg  Met His Leu Asn Gly  Ser Asn Val
    3080             3085             3090

Gln Val  Leu His Arg Thr Gly  Leu Ser Asn Pro Asp  Gly Leu Ala
    3095             3100             3105

Val Asp  Trp Val Gly Gly Asn  Leu Tyr Trp Cys Asp  Lys Gly Arg
    3110             3115             3120

Asp Thr  Ile Glu Val Ser Lys  Leu Asn Gly Ala Tyr  Arg Thr Val
    3125             3130             3135

Leu Val  Ser Ser Gly Leu Arg  Glu Pro Arg Ala Leu  Val Val Asp
    3140             3145             3150

Val Gln  Asn Gly Tyr Leu Tyr  Trp Thr Asp Trp Gly  Asp His Ser
    3155             3160             3165
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Leu Ile  Gly Arg Ile Gly Met  Asp Gly Ser Ser Arg  Ser Val Ile
    3170                 3175               3180

Val Asp  Thr Lys Ile Thr Trp  Pro Asn Gly Leu Thr  Leu Asp Tyr
    3185                 3190               3195

Val Thr  Glu Arg Ile Tyr Trp  Ala Asp Ala Arg Glu  Asp Tyr Ile
    3200                 3205               3210

Glu Phe  Ala Ser Leu Asp Gly  Ser Asn Arg His Val  Val Leu Ser
    3215                 3220               3225

Gln Asp  Ile Pro His Ile Phe  Ala Leu Thr Leu Phe  Glu Asp Tyr
    3230                 3235               3240

Val Tyr  Trp Thr Asp Trp Glu  Thr Lys Ser Ile Asn  Arg Ala His
    3245                 3250               3255

Lys Thr  Thr Gly Thr Asn Lys  Thr Leu Leu Ile Ser  Thr Leu His
    3260                 3265               3270

Arg Pro  Met Asp Leu His Val  Phe His Ala Leu Arg  Gln Pro Asp
    3275                 3280               3285

Val Pro  Asn His Pro Cys Lys  Val Asn Asn Gly Gly  Cys Ser Asn
    3290                 3295               3300

Leu Cys  Leu Leu Ser Pro Gly  Gly Gly His Lys Cys  Ala Cys Pro
    3305                 3310               3315

Thr Asn  Phe Tyr Leu Gly Ser  Asp Gly Arg Thr Cys  Val Ser Asn
    3320                 3325               3330

Cys Thr  Ala Ser Gln Phe Val  Cys Lys Asn Asp Lys  Cys Ile Pro
    3335                 3340               3345

Phe Trp  Trp Lys Cys Asp Thr  Glu Asp Asp Cys Gly  Asp His Ser
    3350                 3355               3360

Asp Glu  Pro Pro Asp Cys Pro  Glu Phe Lys Cys Arg  Pro Gly Gln
    3365                 3370               3375

Phe Gln  Cys Ser Thr Gly Ile  Cys Thr Asn Pro Ala  Phe Ile Cys
    3380                 3385               3390
```

Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn Cys
    3395   3400   3405

Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
    3410   3415   3420

Asn Arg Cys Ile Pro Gly Ile Phe Arg Cys Asn Gly Gln Asp Asn
    3425   3430   3435

Cys Gly Asp Gly Glu Asp Glu Arg Asp Cys Pro Glu Val Thr Cys
    3440   3445   3450

Ala Pro Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro
    3455   3460   3465

Arg Val Trp Val Cys Asp Arg Asp Asn Asp Cys Val Asp Gly Ser
    3470   3475   3480

Asp Glu Pro Ala Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu
    3485   3490   3495

Phe Arg Cys Lys Asp Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys
    3500   3505   3510

Cys Asp Gly Glu Asp Asp Cys Gly Asp Gly Ser Asp Glu Pro Lys
    3515   3520   3525

Glu Glu Cys Asp Glu Arg Thr Cys Glu Pro Tyr Gln Phe Arg Cys
    3530   3535   3540

Lys Asn Asn Arg Cys Val Pro Gly Arg Trp Gln Cys Asp Tyr Asp
    3545   3550   3555

Asn Asp Cys Gly Asp Asn Ser Asp Glu Glu Ser Cys Thr Pro Arg
    3560   3565   3570

Pro Cys Ser Glu Ser Glu Phe Ser Cys Ala Asn Gly Arg Cys Ile
    3575   3580   3585

Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp Cys Ala Asp Gly
    3590   3595   3600

Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met Asp Gln Phe
    3605   3610   3615

Gln Cys   Lys Ser Gly His Cys   Ile Pro Leu Arg Trp   Arg Cys Asp
    3620   3625   3630

Ala Asp   Ala Asp Cys Met Asp   Gly Ser Asp Glu Glu   Ala Cys Gly
    3635   3640   3645

Thr Gly   Val Arg Thr Cys Pro   Leu Asp Glu Phe Gln   Cys Asn Asn
    3650   3655   3660

Thr Leu   Cys Lys Pro Leu Ala   Trp Lys Cys Asp Gly   Glu Asp Asp
    3665   3670   3675

Cys Gly   Asp Asn Ser Asp Glu   Asn Pro Glu Glu Cys   Ala Arg Phe
    3680   3685   3690

Val Cys   Pro Pro Asn Arg Pro   Phe Arg Cys Lys Asn   Asp Arg Val
    3695   3700   3705

Cys Leu   Trp Ile Gly Arg Gln   Cys Asp Gly Thr Asp   Asn Cys Gly
    3710   3715   3720

Asp Gly   Thr Asp Glu Glu Asp   Cys Glu Pro Pro Thr   Ala His Thr
    3725   3730   3735

Thr His   Cys Lys Asp Lys Lys   Glu Phe Leu Cys Arg   Asn Gln Arg
    3740   3745   3750

Cys Leu   Ser Ser Ser Leu Arg   Cys Asn Met Phe Asp   Asp Cys Gly
    3755   3760   3765

Asp Gly   Ser Asp Glu Glu Asp   Cys Ser Ile Asp Pro   Lys Leu Thr
    3770   3775   3780

Ser Cys   Ala Thr Asn Ala Ser   Ile Cys Gly Asp Glu   Ala Arg Cys
    3785   3790   3795

Val Arg   Thr Glu Lys Ala Ala   Tyr Cys Ala Cys Arg   Ser Gly Phe
    3800   3805   3810

His Thr   Val Pro Gly Gln Pro   Gly Cys Gln Asp Ile   Asn Glu Cys
    3815   3820   3825

Leu Arg   Phe Gly Thr Cys Ser   Gln Leu Cys Asn Asn   Thr Lys Gly
    3830   3835   3840

Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys Thr His Asn
    3845   3850   3855

Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr Ile Ala
    3860   3865   3870

Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His Ser
    3875   3880   3885

Ala Tyr Glu Gln Ala Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
    3890   3895   3900

Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn
    3905   3910   3915

Trp His Thr Gly Thr Ile Ser Tyr Arg Ser Leu Pro Pro Ala Ala
    3920   3925   3930

Pro Pro Thr Thr Ser Asn Arg His Arg Arg Gln Ile Asp Arg Gly
    3935   3940   3945

Val Thr His Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile
    3950   3955   3960

Ala Ile Asp Trp Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly
    3965   3970   3975

Arg Asp Val Ile Glu Val Ala Gln Met Lys Gly Glu Asn Arg Lys
    3980   3985   3990

Thr Leu Ile Ser Gly Met Ile Asp Glu Pro His Ala Ile Val Val
    3995   4000   4005

Asp Pro Leu Arg Gly Thr Met Tyr Trp Ser Asp Trp Gly Asn His
    4010   4015   4020

Pro Lys Ile Glu Thr Ala Ala Met Asp Gly Thr Leu Arg Glu Thr
    4025   4030   4035

Leu Val Gln Asp Asn Ile Gln Trp Pro Thr Gly Leu Ala Val Asp
    4040   4045   4050

Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp Ala Lys Leu Ser Val
    4055   4060   4065

Ile Gly Ser Ile Arg Leu Asn Gly Thr Asp Pro Ile Val Ala Ala
    4070   4075   4080

Asp Ser Lys Arg Gly Leu Ser His Pro Phe Ser Ile Asp Val Phe
    4085   4090   4095

Glu Asp Tyr Ile Tyr Gly Val Thr Tyr Ile Asn Asn Arg Val Phe
    4100   4105   4110

Lys Ile His Lys Phe Gly His Ser Pro Leu Val Asn Leu Thr Gly
    4115   4120   4125

Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
    4130   4135   4140

Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp
    4145   4150   4155

Leu Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn
    4160   4165   4170

Gly Lys Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro
  . 4175   4180   4185

Thr Pro Pro Pro Asp Ala Pro Arg Pro Gly Thr Cys Asn Leu Gln
    4190   4195   4200

Cys Phe Asn Gly Gly Ser Cys Phe Leu Asn Ala Arg Arg Gln Pro
    4205   4210   4215

Lys Cys Arg Cys Gln Pro Arg Tyr Thr Gly Asp Lys Cys Glu Leu
    4220   4225   4230

Asp Gln Cys Trp Glu His Cys Arg Asn Gly Gly Thr Cys Ala Ala
    4235   4240   4245

Ser Pro Ser Gly Met Pro Thr Cys Arg Cys Pro Thr Gly Phe Thr
    4250   4255   4260

Gly Pro Lys Cys Thr Gln Gln Val Cys Ala Gly Tyr Cys Ala Asn
    4265   4270   4275

Asn Ser Thr Cys Thr Val Asn Gln Gly Asn Gln Pro Gln Cys Arg
    4280   4285   4290

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Cys Leu   Pro Gly Phe Leu Gly   Asp Arg Cys Gln Tyr   Arg Gln Cys
    4295   4300   4305

Ser Gly   Tyr Cys Glu Asn Phe   Gly Thr Cys Gln Met   Ala Ala Asp
    4310   4315   4320

Gly Ser   Arg Gln Cys Arg Cys   Thr Ala Tyr Phe Glu   Gly Ser Arg
    4325   4330   4335

Cys Glu   Val Asn Lys Cys Ser   Arg Cys Leu Glu Gly   Ala Cys Val
    4340   4345   4350

Val Asn   Lys Gln Ser Gly Asp   Val Thr Cys Asn Cys   Thr Asp Gly
    4355   4360   4365

Arg Val   Ala Pro Ser Cys Leu   Thr Cys Val Gly His   Cys Ser Asn
    4370   4375   4380

Gly Gly   Ser Cys Thr Met Asn   Ser Lys Met Met Pro   Glu Cys Gln
    4385   4390   4395

Cys Pro   Pro His Met Thr Gly   Pro Arg Cys Glu Glu   His Val Phe
    4400   4405   4410

Ser Gln   Gln Gln Pro Gly
    4415

<210> 12
<211> 986
<212> PRT
<213> H. sapiens

<400> 12

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1   5   10   15

Val Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
        20   25   30

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
    50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

```
Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
            85              90              95


Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100             105             110


Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115             120             125


Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
            130             135             140


Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145             150             155             160


Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165             170             175


Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180             185             190


Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
            195             200             205


Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210             215             220


Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225             230             235             240


Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245             250             255


Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260             265             270


Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
            275             280             285


Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290             295             300


Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305             310             315             320
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```
Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
              325             330             335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
              340             345             350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
              355             360             365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370             375             380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385             390             395                 400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
              405             410             415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
              420             425             430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
              435             440             445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450             455             460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465             470             475             480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
              485             490             495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
              500             505             510

Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
              515             520             525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
    530             535             540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545             550             555             560
```

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
    610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
            675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
    690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
            740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
            755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

```
Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
                805             810                 815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
                820             825                 830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
                835             840                 845

Val Pro Pro Pro Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser
    850                 855                 860

Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu
865                 870                 875                 880

Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro
                885                 890                 895

Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp
                900                 905                 910

Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn
                915                 920                 925

Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala
    930                 935                 940

Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp
945                 950                 955                 960

Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys
                965                 970                 975

Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn
                980                 985


<210>   13
<211>   896
<212>   PRT
<213>   H. sapiens

<400>   13

Met Leu Thr Pro Pro Leu Leu Leu Leu Pro Leu Leu Ser Ala Leu
1               5               10                  15

Ala Ala Ala Ala Ile Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln Phe
            20                  25                  30
```

Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys Asp
        35   40   45

Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile Cys
        50   55   60

Pro Gln Ser Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu
65   70   75   80

Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln
                85   90   · 95

Asp Cys Met Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu Leu Gln
            100   105   110

Gly Asn Cys Ser Arg Leu Gly Cys Gln His His Cys Val Pro Thr Leu
            115   120   125

Asp Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Gln Ala Asp
    130   135   140

Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr Cys
145   150   155   160

Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Ile Cys Gly Cys Val
            165   170   175

Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys Asn
            180   185   190

Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln Asn
        195   200   205

Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr Pro
    210   215   220

Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn Glu
225   230   235   240

Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln Leu
            245   250   255

Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His Thr
            260   265   270

Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile Asp
        275   280   285

Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg Ile
    290   295   300

Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp Leu
305   310   315   320

Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
            325   330   335

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys Asp
            340   345   350

Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val Phe
        355   360   365

Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp Ala
    370   375   380

Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys Gly
385   390   395   400

Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly Leu
            405   410   415

Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala Asn
        420   425   430

Ala Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser Thr
        435   440   445

Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His Ile
    450   455   460

Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu Asn
465   470   475   480

Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu Ala
            485   490   495

Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser Leu
        500   505   510

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Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe Leu
        515   520   525

Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met Gly
        530   535   540

Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met Asn
545   550   555   560

Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe Ala
            565   570   575

Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr Glu
            580   585   590

Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val Ala
            595   600   605

Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro Lys
        610   615   620

Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg Lys
625   630   635   640

Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Met Val Asp
            645   650   655

Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro Lys
            660   665   670

Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser His
        675   680   685

Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly Leu
        690   695   700

Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe Tyr
705   710   715   720

Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile Val
            725   730   735

Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His Gly
        740   745   750

Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg Leu
    755   760   765

Glu Arg Gly Val Gly Gly Ala Pro Pro Thr Val Thr Leu Leu Arg Ser
    770   775   780

Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala Gln Gln Gln
785   790   795   800

Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser Ser
            805   810   815

Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu Asp
        820   825   830

Gln Val Leu Asp Ala Asp Gly Val Thr Cys Leu Ala Asn Pro Ser Tyr
        835   840   845

Val Pro Pro Gly Gly Arg Leu Val Pro Arg Gly Ser Tyr Pro Tyr Asp
    850   855   860

Val Pro Asp Tyr Ala Ile Glu Gly His Val Gly Leu Asn Asp Ile Phe
865   870   875   880

Glu Ala Gln Lys Ile Glu Trp His Glu Gly His His His His His His
            885   890   895

<210> 14
<211> 2688
<212> PRT
<213> H. sapiens

<400> 14

Ala Thr Gly Cys Thr Gly Ala Cys Cys Cys Gly Cys Cys Gly Thr
1   5   10   15

Thr Gly Cys Thr Cys Cys Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
            20   25   30

Cys Cys Thr Gly Cys Thr Cys Thr Cys Ala Gly Cys Thr Cys Thr Gly
        35   40   45

Gly Thr Cys Gly Cys Gly Gly Cys Gly Gly Cys Thr Ala Thr Cys Gly
    50   55   60

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```
Ala Cys Gly Cys Cys Cys Cys Thr Ala Ala Gly Ala Cys Thr Thr Gly
65              70              75              80

Cys Ala Gly Cys Cys Cys Cys Ala Ala Gly Cys Ala Gly Thr Thr Thr
            85              90              95

Gly Cys Cys Thr Gly Cys Ala Gly Ala Gly Ala Thr Cys Ala Ala Ala
            100             105             110

Thr Ala Ala Cys Cys Thr Gly Thr Ala Thr Cys Thr Cys Ala Ala Ala
            115             120             125

Gly Gly Gly Cys Thr Gly Gly Cys Gly Gly Thr Gly Cys Gly Ala Cys
    130             135             140

Gly Gly Thr Gly Ala Gly Ala Gly Gly Gly Ala Cys Thr Gly Cys Cys
145             150             155             160

Cys Ala Gly Ala Cys Gly Gly Ala Thr Cys Thr Gly Ala Cys Gly Ala
            165             170             175

Gly Gly Cys Cys Cys Cys Thr Gly Ala Gly Ala Thr Thr Thr Gly Thr
            180             185             190

Cys Cys Ala Cys Ala Gly Ala Gly Thr Ala Ala Gly Gly Cys Cys Cys
    195             200      .       205

Ala Gly Cys Gly Ala Thr Gly Cys Cys Ala Gly Cys Cys Ala Ala Ala
    210             215             220

Cys Gly Ala Gly Cys Ala Thr Ala Ala Cys Thr Gly Cys Cys Thr Gly
225             230             235             240

Gly Gly Thr Ala Cys Thr Gly Ala Gly Cys Thr Gly Thr Gly Thr Gly
            245             250             255

Thr Thr Cys Cys Cys Ala Thr Gly Thr Cys Cys Cys Gly Cys Cys Thr
    260             265             270

Cys Thr Gly Cys Ala Ala Thr Gly Gly Gly Thr Cys Cys Ala Gly
    275             280             285

Gly Ala Cys Thr Gly Cys Ala Thr Gly Gly Ala Cys Gly Gly Cys Thr
    290             295             300
```

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```
Cys Ala Gly Ala Thr Gly Ala Gly Gly Gly Gly Cys Cys Cys Cys Ala
305             310         315                 320

Cys Thr Gly Cys Cys Gly Ala Gly Ala Gly Cys Thr Cys Cys Ala Ala
            325             330             335

Gly Gly Cys Ala Ala Cys Thr Gly Cys Thr Cys Thr Cys Gly Cys Cys
            340  .           345             350

Thr Gly Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Ala Cys Cys Ala
        355             360             365

Thr Thr Gly Thr Gly Thr Cys Cys Cys Cys Ala Cys Ala Cys Thr Cys

    370                 375                 380

Gly Ala Thr Gly Gly Gly Cys Cys Cys Ala Cys Cys Thr Gly Cys Thr
385             390             395                 400

Ala Cys Thr Gly Cys Ala Ala Cys Ala Gly Cys Ala Gly Cys Thr Thr
            405             410             415

Thr Cys Ala Gly Cys Thr Thr Cys Ala Gly Gly Cys Ala Gly Ala Thr
            420             425             430

Gly Gly Cys Ala Ala Gly Ala Cys Cys Thr Gly Cys Ala Ala Ala Gly
            435             440             445

Ala Thr Thr Thr Thr Gly Ala Thr Gly Ala Gly Thr Gly Cys Thr Cys
    450             455             460

Ala Gly Thr Gly Thr Ala Cys Gly Gly Cys Ala Cys Cys Thr Gly Cys
465             470             475                 480

Ala Gly Cys Cys Ala Gly Cys Thr Ala Thr Gly Cys Ala Cys Cys Ala
            485             490             495

Ala Cys Ala Cys Ala Gly Ala Cys Gly Gly Cys Thr Cys Cys Thr Thr
        500             505             510

Cys Ala Thr Ala Thr Gly Thr Gly Gly Cys Thr Gly Thr Gly Thr Thr
        515             520             525

Gly Ala Ala Gly Gly Ala Thr Ala Cys Cys Thr Cys Cys Thr Gly Cys
    530             535             540
```

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Ala Gly Cys Cys Gly Gly Ala Thr Ala Ala Cys Cys Gly Cys Thr Cys
545   550   555   560

Cys Thr Gly Cys Ala Ala Gly Gly Cys Cys Ala Ala Gly Ala Ala Cys
              565   570   575

Gly Ala Gly Cys Cys Ala Gly Thr Ala Gly Ala Cys Cys Gly Gly Cys
         580   585   590

Cys Cys Cys Cys Thr Gly Thr Gly Cys Thr Gly Thr Thr Gly Ala Thr
         595   600   605

Ala Gly Cys Cys Ala Ala Cys Thr Cys Cys Ala Gly Ala Ala Cys
     610   615   620

Ala Thr Cys Thr Thr Gly Gly Cys Cys Ala Cys Gly Thr Ala Cys Cys
625   630   635   640

Thr Gly Ala Gly Thr Gly Gly Gly Gly Cys Cys Cys Ala Gly Gly Thr
         645   650   655

Gly Thr Cys Thr Ala Cys Cys Ala Thr Cys Ala Cys Ala Cys Cys Thr
         660   665   670

Ala Cys Gly Ala Gly Cys Ala Cys Gly Cys Gly Gly Cys Ala Gly Ala
     675   680   685

Cys Cys Ala Cys Ala Gly Cys Cys Ala Thr Gly Gly Ala Cys Thr Thr
     690   695   700

Cys Ala Gly Cys Thr Ala Thr Gly Cys Cys Ala Ala Cys Gly Ala Gly
705   710   715   720

Ala Cys Cys Gly Thr Ala Thr Gly Cys Thr Gly Gly Gly Thr Gly Cys
         725   730   735

Ala Thr Gly Thr Thr Gly Gly Gly Gly Ala Cys Ala Gly Thr Gly Cys
         740   745   750

Thr Gly Cys Thr Cys Ala Gly Ala Cys Gly Cys Ala Gly Cys Thr Cys
     755   760   765

Ala Ala Gly Thr Gly Thr Gly Cys Cys Cys Gly Cys Ala Thr Gly Cys
     770   775   780

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Cys Thr Gly Gly Cys Cys Thr Ala Ala Ala Gly Gly Gly Cys Thr Thr
785   790   795   800

Cys Gly Thr Gly Gly Ala Thr Gly Ala Gly Cys Ala Cys Ala Cys Cys
          805   810   815

Ala Thr Cys Ala Ala Cys Ala Thr Cys Thr Cys Cys Thr Cys Ala
          820   825   830

Gly Thr Cys Thr Gly Cys Ala Cys Cys Ala Cys Gly Thr Gly Gly Ala
          835   840   845

Ala Cys Ala Gly Ala Thr Gly Gly Cys Cys Ala Thr Cys Gly Ala Cys
    850   855   860

Thr Gly Gly Cys Thr Gly Ala Cys Ala Gly Gly Cys Ala Ala Cys Thr
865   870   875   880

Thr Cys Thr Ala Cys Thr Thr Thr Gly Thr Gly Gly Ala Thr Gly Ala
                885   890   895

Cys Ala Thr Cys Gly Ala Thr Gly Ala Thr Ala Gly Gly Ala Thr Cys
        900   905   910

Thr Thr Thr Gly Thr Cys Thr Gly Cys Ala Ala Cys Ala Gly Ala Ala
        915   920   925

Ala Thr Gly Gly Gly Gly Ala Cys Ala Cys Ala Thr Gly Thr Gly Thr
    930   935   940

Cys Ala Cys Ala Thr Thr Gly Cys Thr Ala Gly Ala Cys Cys Thr Gly
945   950   955   960

Gly Ala Ala Cys Thr Cys Thr Ala Cys Ala Ala Cys Cys Cys Cys Ala
                965   970   975

Ala Gly Gly Gly Cys Ala Thr Thr Gly Cys Cys Cys Thr Gly Gly Ala
        980   985   990

Cys Cys Cys Thr Gly Cys Cys Ala Thr Gly Gly Gly Gly Ala Ala Gly
        995   1000   1005

Gly Thr Gly Thr Thr Thr Thr Thr Cys Ala Cys Thr Gly Ala Cys
    1010   1015   1020

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Thr Ala Thr Gly Gly Gly Cys Ala Gly Ala Thr Cys Cys Cys Ala
    1025   1030   1035

Ala Ala Gly Gly Thr Gly Gly Ala Ala Cys Gly Cys Thr Gly Thr
    1040   1045   1050

Gly Ala Cys Ala Thr Gly Gly Ala Thr Gly Gly Gly Cys Ala Gly
    1055   1060   1065

Ala Ala Cys Cys Gly Cys Ala Cys Cys Ala Ala Gly Cys Thr Cys
    1070   1075   1080

Gly Thr Cys Gly Ala Cys Ala Gly Cys Ala Ala Gly Ala Thr Thr
    1085   1090   1095

Gly Thr Gly Thr Thr Thr Cys Cys Thr Cys Ala Thr Gly Gly Cys
    1100   1105   1110

Ala Thr Cys Ala Cys Gly Cys Thr Gly Gly Ala Cys Cys Thr Gly
    1115   1120   1125

Gly Thr Cys Ala Gly Cys Cys Gly Cys Cys Thr Thr Gly Thr Cys
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    1145   1150   1155

Thr Ala Thr Cys Thr Gly Gly Ala Cys Thr Ala Thr Ala Thr Thr
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Gly Ala Ala Gly Thr Gly Gly Thr Gly Gly Ala Cys Thr Ala Thr
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Gly Ala Gly Gly Gly Cys Ala Ala Gly Gly Gly Cys Cys Gly Cys
    1190   1195   1200

Cys Ala Gly Ala Cys Cys Ala Thr Cys Ala Thr Cys Cys Ala Gly
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Gly Gly Cys Ala Thr Cys Cys Thr Gly Ala Thr Thr Gly Ala Gly
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Cys Ala Cys Cys Thr Gly Thr Ala Cys Gly Gly Cys Cys Thr Gly
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Cys Thr Cys Cys Ala Cys Ala Thr Cys Thr Ala Cys Cys Ala Cys
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Cys Gly Ala Gly Thr Gly Ala Gly Gly Ala Gly Cys Cys Ala Thr
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Cys Ala Gly Thr Ala Thr Gly Gly Gly Ala Ala Gly Cys Cys Gly
    1445   1450   1455

Gly Gly Thr Gly Gly Cys Thr Gly Cys Thr Cys Thr Gly Ala Cys
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Ala Thr  Cys Thr Gly Cys Cys  Thr Gly Cys Thr Gly  Gly Cys Cys
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Cys Gly  Gly Ala Cys Cys Thr  Gly Cys Cys Gly Cys  Thr Gly Cys
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Cys Cys  Gly Gly Ala Gly Cys  Ala Thr Gly Ala Gly  Cys Thr Gly
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Cys Gly  Ala Gly Cys Cys Cys  Thr Gly Gly Ala Cys  Thr Thr Cys
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Thr Thr  Cys Ala Thr Cys Thr  Ala Cys Thr Thr Thr  Gly Cys Cys
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Gly Ala  Cys Ala Cys Cys Ala  Cys Cys Ala Gly Cys  Thr Ala Cys
    1730             1735             1740


Cys Thr  Cys Ala Thr Thr Gly  Gly Cys Cys Gly Cys  Cys Ala Gly
    1745             1750             1755


Ala Ala  Gly Ala Thr Thr Gly  Ala Thr Gly Gly Cys  Ala Cys Thr
    1760             1765             1770


Gly Ala  Gly Cys Gly Gly Gly  Ala Gly Ala Cys Cys  Ala Thr Cys
    1775             1780             1785


Cys Thr  Gly Ala Ala Gly Gly  Ala Cys Gly Gly Cys  Ala Thr Cys
    1790             1795             1800


Cys Ala  Cys Ala Ala Thr Gly  Thr Gly Gly Ala Gly  Gly Gly Thr
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Gly Thr  Gly Gly Cys Cys Gly  Thr Gly Gly Ala Cys  Thr Gly Gly
    1820             1825             1830


Ala Thr  Gly Gly Gly Ala Gly  Ala Cys Ala Ala Thr  Cys Thr Gly
    1835             1840             1845


Thr Ala  Cys Thr Gly Gly Ala  Cys Gly Gly Ala Cys  Gly Ala Thr
    1850             1855             1860


Gly Gly  Gly Cys Cys Cys Ala  Ala Ala Ala Gly Ala  Cys Ala
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Ala Thr  Cys Ala Gly Cys Gly  Thr Gly Gly Cys Cys  Ala Gly Gly
    1880             1885             1890


Cys Thr  Gly Gly Ala Gly Ala  Ala Ala Gly Cys Thr  Gly Cys Thr
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Cys Ala  Gly Ala Cys Cys Cys  Gly Cys Ala Ala Gly  Ala Cys Thr
    1910             1915             1920
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Ala Thr   Gly Ala Cys Ala Cys   Ala Cys Cys Cys Cys   Ala Gly Gly
    1940              1945                 1950


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    1955              1960                 1965


Cys Cys   Ala Cys Thr Cys Ala   Ala Thr Gly Gly Gly   Thr Gly Gly
    1970              1975                 1980


Ala Thr   Gly Thr Ala Cys Thr   Gly Gly Ala Cys Ala   Gly Ala Cys
    1985              1990                 1995


Thr Gly   Gly Gly Ala Gly Gly   Ala Gly Gly Ala Cys   Cys Cys Cys
    2000              2005                 2010


Ala Ala   Gly Gly Ala Cys Ala   Gly Thr Cys Gly Gly   Cys Gly Thr
    2015              2020                 2025


Gly Gly   Gly Cys Gly Gly Cys   Thr Gly Gly Ala Gly   Ala Gly Gly
    2030              2035                 2040


Gly Cys   Gly Thr Gly Gly Ala   Thr Gly Gly Ala Thr   Gly Gly Cys
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Thr Cys   Ala Cys Ala Cys Cys   Gly Ala Gly Ala Cys   Ala Thr Cys
    2060              2065                 2070


Thr Thr   Thr Gly Thr Cys Ala   Cys Cys Thr Cys Cys   Ala Ala Gly
    2075              2080                 2085


Ala Cys   Ala Gly Thr Gly Cys   Thr Thr Thr Gly Gly   Cys Cys Cys
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Gly Ala  Cys Cys Gly Gly Ala  Ala Gly Ala Thr Thr  Gly Thr Gly
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Cys Thr  Gly Ala Ala Cys Cys  Ala Cys Gly Cys Cys  Thr Thr Thr
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Gly Gly  Cys Cys Thr Gly Thr  Gly Thr Cys Ala Cys  Cys Ala Thr
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Cys Gly  Cys Thr Thr Gly Gly  Ala Ala Cys Gly Gly  Gly Gly Thr
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Gly Thr  Ala Gly Gly Ala Gly  Gly Cys Gly Cys Ala  Cys Cys Cys
    2315              2320              2325

Cys Cys  Cys Ala Cys Thr Gly  Thr Gly Ala Cys Cys  Cys Thr Thr
    2330              2335              2340

Cys Thr  Gly Cys Gly Cys Ala  Gly Thr Gly Ala Gly  Cys Gly Gly
    2345              2350              2355

Cys Cys  Cys Cys Cys Cys Ala  Thr Cys Thr Thr Thr  Gly Ala Gly
    2360              2365              2370
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Ala Thr  Cys Cys Gly Ala Ala  Thr Gly Thr Ala Thr  Gly Ala Thr
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Gly Cys  Cys Cys Ala Gly Cys  Ala Gly Cys Ala Gly  Cys Ala Ala
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Gly Thr  Thr Gly Gly Cys Ala  Cys Cys Ala Ala Cys  Ala Ala Ala
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    2420                2425             2430

Gly Gly  Cys Gly Gly Cys Thr  Gly Cys Ala Gly Cys  Ala Gly Cys
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Cys Thr  Gly Thr Gly Cys Thr  Thr Gly Gly Cys Cys  Ala Cys Cys
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Cys Cys  Thr Gly Gly Gly Ala  Gly Cys Cys Gly Cys  Cys Ala Gly
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Thr Gly  Cys Gly Cys Cys Thr  Gly Thr Gly Cys Thr  Gly Ala Gly
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Thr Gly  Cys Thr Thr Gly Gly  Cys Gly Ala Ala Cys  Cys Cys Ala
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Thr Cys  Cys Thr Ala Cys Gly  Thr Gly Cys Cys Thr  Cys Cys Ala
    2540                2545             2550

Cys Cys  Cys Cys Ala Gly Thr  Gly Cys Cys Ala Gly  Cys Cys Ala
    2555                2560             2565

Gly Gly  Cys Gly Ala Gly Thr  Thr Thr Gly Cys Cys  Thr Gly Thr
    2570                2575             2580

Gly Cys  Cys Ala Ala Cys Ala  Gly Cys Cys Gly Cys  Thr Gly Cys
    2585                2590             2595
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Ala Ala  Cys Gly Ala Thr Thr  Gly Cys Cys Thr Gly  Gly Ala Cys
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Cys Cys  Ala Gly Cys Cys Cys  Thr Cys Thr Gly Cys  Cys Ala Thr
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